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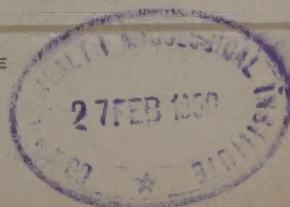


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FOOD AND AGRICULTURE

THE FAO EUROPEAN
BULLETIN No. 4

October—December 1949

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OF THE FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS

SECOND YEAR

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Lord BOYD ORR

Nobel Peace Prize 1949

Every now and then humanity is cheered by the recognition during his lifetime of a good or great man and his work. Such an occasion has taken place in the awarding of the Nobel Peace Prize to Lord Boyd Orr.

He aroused the conscience of the world by crying out against the madness of destroying wheat while millions starved, and finally convinced the nations that they must work together to put an end to perpetual hunger in the midst of plenty.

In 1935 two of his close collaborators who were

then working with the League of Nations carried a resolution which established a Mixed Commission 'marrying' Food and Agriculture.

In 1942 in the United States Sir John Boyd Orr prepared the ground for the Hot Springs Conference which was to take up Franklin D. Roosevelt's call for 'Freedom from Want'. But he was not to attend that conference. Nevertheless he appeared as a shadow — on the screen in the film 'World of Plenty'. He had brought his message home to the conference so much so in his preparatory work that when his figure appeared on the screen at the end of the film, the whole audience rose and cheered.

When the Food and Agriculture Organization was set up, Sir John Orr (then an Independent Member of the British Parliament) attended the first meeting in Quebec in 1945 merely as a technical adviser to the British Delegation.

He made one speech and then went up into the mountains — a few days later he was brought back by a Conference delegation and was made FAO's first Director-General.

*FAO was the first United Nations Agency to be formed after the World War 1939-46 and its policy was laid out by its Director-General. He said; 'It is no use trying to build the new world from the top down, with political ideas of spheres of influence and so on. We have to build it from the bottom upwards, and provide first the primary necessities of life for the people who have never had them... The people of the world are longing for something big and generous, something definite, on which they can work together. They are sick of the endless international bickering and quarrelling over things which they do not understand. A world food plan based on human needs will provide such a basis of cooperation among governments and peoples'. **

One of the first things to be undertaken was a survey to determine the exact world food position. It was imperative to know how much food it would need to meet the needs of the hungry people in the world. The

* SOURCE — 'The Man and His Message', by Ritchie Calder, 'Survey Graphic', March 1948.

membership of FAO then numbered only 42 nations but more than seventy countries cooperated to produce the first World Food Survey. It was compiled with the help of many experts all over the world. The statistical results were handed to nutritionists who assessed therefrom the minimum goals to reach in order to obtain the minimum amount of food needed by the people of each region to maintain health. These results showed that one out of every two people in the world was subsisting even before the war at a level of food consumption high enough neither to maintain normal health, allow for normal growth of children nor to furnish enough energy for normal work.

When the United Nations met for the first time in London, they were preoccupied with the threatened famine. Lord Boyd Orr called a conference in Washington to which he invited only ten nations, but once again the response to his appeal for cooperation was heartening, and twenty-three nations presented themselves. A direct consequence of this conference was the setting-up of the successful International Emergency Food Council which on the basis of FAO assessments allocated available food among the nations.

This International Emergency Food Council was indeed successful, for it recommended allocations for fifteen major commodities. Its membership rose to 35 countries and although it had no executive power to persuade nations to agree to its directives, when IEFEC was finally dissolved in June 1949, more than 90% of its recommendations had been complied with by the nations.

The Conference then instructed the Director-General to prepare a plan for a permanent World Food Administration. At the Second Annual Conference of FAO in 1946 in Copenhagen, he presented proposals for a World Food Board.

The World Food Board was, however, rejected in the form proposed by Lord Boyd Orr. It was planned to be a body with powers to build up a world reserve of food which could act as a buffer against extreme price fluctuations. It could have bought price-depressing surpluses from the market to build up the stock and could have released needed quantities into world trade channels if shortages threatened to force prices above an agreed level. These buffer stocks would also have insured against drought or disaster which might entail famine.

Instead, a year later, it was agreed to set up a World Food Council. At the Meetings of this Council and at the FAO Annual Conference, delegates discuss their countries' food and agricultural programmes for the next year, show what they expect to produce, to import and export, give estimates of their needs. Out of such stock-taking comes a world panorama, showing country by country, year by year, production and trade in relation to actual needs. Specific problems and difficulties are discussed, and their solutions envisaged and proposed.

Lord Boyd Orr's name is linked with many other FAO's programmes. Regional programmes for Europe, the Middle East, the Far East and Latin America were established under his guidance. In Europe member countries met at his call in Rome and decided that the most urgent problems were to raise the food standards of the populations of their countries, to deal with seeds, agricultural machinery, the protection of plants against diseases and pests, cereals, livestock breeding, dairying, forestry and fisheries. A small expert committee was set up to deal with each of these problems.

A concrete action programme to help raise food production in the Near East was the next regional aim. In 1948 invitations were sent to member nations, and non-member nations were invited to send observers, to a meeting scheduled to draw up a pattern of regional organization for food and agricultural development. In this pattern, 'cottage industries' were to be developed in order to increase the purchasing power of low income groups. The drainage of water-logged areas was another high priority task. The installation of wells and equipment to irrigate lands, the teaching of nutrition in schools, the exchange of trained technical personnel, the large-scale use of imported livestock, a campaign against locusts were all matters for action.

In the Far East, member nations considered the problems peculiar to their own region. Amongst these, rice was given a high priority.

Not only were ways and means sought to increase its production but also to prevent its loss through rats, insects, fungi and careless handling in shipping. Consideration was given to the improvement of rice diets through better milling and cooking practices, to the questions of how to feed low income groups and those suffering from malnutrition and how to develop fisheries in order to supply a cheap source of proteins. A Rice Commission was finally set up in the FAO Far Eastern Regional Office.

In Latin America plans proceeded on rather a different pattern. Officers were sent out to consult with individual governments, in view of the size of the continent and the different geographical and climatic conditions. Once their reports had been received, three separate technical conferences were convened to deal with problems of nutrition, forestry and control of infestation in stored grains. This autumn a general regional conference was held in Latin America.

Other aspects of FAO's work include special missions, and technical assistance to member countries in dealing with specific problems, the coordination of work with other United Nations agencies, a vast programme of publications, etc.

In June of this year, the World Food Council asked the Director General of FAO to study the handling of surpluses. A committee of internationally-known economists was set up to examine this question. A plan, in many ways resembling Lord Boyd Orr's projected World Food Board, and to be presented at the Fifth Annual Conference of FAO, was drawn up for the creation of an International Commodity Clearing House. So far the Conference recommended the establishment forthwith of an FAO Committee on Commodity Problems which would work under the Council of FAO (World Food Council).

And it seems as if another of the ideas of Lord Boyd Orr will live on, the idea of the economic development of under-developed countries. By now, President Truman's plan for 'Technical Assistance for Economic Development of Under-Developed Countries' is known all over the world. FAO is to play a major part in the carrying-out of this plan. The UN Economic and Social Council decided that FAO, in accordance with the proposals put forward by the United Nations and its specialized agencies, should have the largest share of the available funds. The idea behind this plan was also a cornerstone of Lord Boyd Orr's projected World Food Board.

And so the fruits of his mind, the results of his ideals and experience are still felt. The Nobel Peace Prize seems a just reward for the man who says ; 'To my mind, the most important feature of the United Nations Food and Agriculture Organization is that it affords a means of bringing governments together for a definite, understandable, concrete scheme and gives them something on which they can begin to cooperate : and, once they begin to cooperate in one field, it will be easier to extend cooperation to other fields.

'FAO is founded on the simple proposition that there can be food for all. Starvation and want in the midst of potential plenty is a standing disgrace and a fatal weakness in our civilization. It is a root and cause of war. It can and must be eliminated'. *

* SOURCE ; id. id.

PAST AND FUTURE OF WALCHEREN

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Director of the State Service
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A. FRANKE,

Inspector, Zeeland, of the State Service
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Head Regrouping Service, Walcheren

1. — ORIGIN

Like all the islands of the Dutch provinces of Zeeland and South Holland, the Isle of Walcheren has been built up from the sea. The upper layer, which varies in thickness from 10 to 15 metres, was formed during the later geological period, the Holocene period. After sea deposits had formed a layer of fine-sandy to clayey soil in a shallow inland sea (separated from the North Sea by a wall which arose after the formation of the Straits of Dover) there came a period of peaty vegetation. This growth was so abundant that behind the wall, which had meanwhile been transformed into dunes by shifting sands, the peatbog developed from a transition moor into an upland moor. Only a few river branches found their way through this peat soil which extended from Northern France to the north of the Netherlands.

From records dating back to the time of the Roman Empire and archaeological finds in the peatmoor it may be assumed that these conditions prevailed in the beginning of our era. Human habitation was confined mainly to the elevated areas, *i.e.*, the dunes.

Shortly after a relentless conflict set in between sea and land in which, for the time being, man played the part of anxious spectator. The outlines of the Isle of Walcheren were fixed during the first 7 centuries of our era.

Gigantic inundations (probably resulting from a relative rise of the sea level) broke the continuity of the protecting range of dunes and wore broad and deep channels in the peat

soil. The present mouth of the Scheldt was formed during this period.

The island was also intersected by gullies called 'creeks'. These, however, were smaller and were silted up with sandy and loamy material when the sea became calmer. Naturally, the subsoil of these former creeks no longer contains peat. On the remaining peat a layer of clay was deposited which in the course of the ages attained a thickness of 1 or 2 metres.

By the end of this period the Isle of Walcheren was mainly square in form and protected on two sides from the sea by dunes. On the other two sides dikes were built. At first these dikes were small, but to some extent they tempered the action of the sea and may be regarded as the beginning of a pre-eminently Dutch occupation : the building of dikes.

These dams were erected about 800 A.D. However, they did not provide adequate protection from the sea. Again and again the island and its inhabitants suffered fresh inundations. New gaps were made, new creeks were formed and fresh material deposited on the clay which had already been formed on the peaty subsoil, resulting in the silting up of the creeks. After every inundation the gaps were filled, but in spite of this the island was considerably reduced in size.

The development outlined above was reconstructed by the Institution for Soil Mapping at Wageningen from the CaCO_3 content of the silted up creeks.

Naturally, at first the filled up creeks lay below the level of the adjoining clay which

rested on peat moor. However, as gradually the clay layer covering the peat moor grew thicker and the drainage improved, the peat subsided. Since this peat is lacking in the silted up creeks an inversion of the relief of the soil was brought about, so that the peat moor areas with a clay covering are under the level of the silted up creeks. The differences in height amount to approximately 2 or 3 metres.

Roughly, the Walcheren landscape consists of lower parts (basins) and higher strips (ridges) agrogeologically called 'basin grounds' and 'ridge-grounds'.

Along the northern and western side of the island there lies a wide stretch of ground which is rather flat; inversion did not occur here because the peat is lacking or is only present in a thin layer.

The subsiding of 'basin grounds' has been strongly accentuated through the excavation of the peat, which has been going on for centuries. This peat was burnt and from the ashes kitchen salt was made. This mediaeval, remunerative occupation has caused adverse agricultural conditions. The peat was removed in a haphazard way with the result that the major part of the plots in the basins is uneven and is not suitable for mechanical operations.

Only in the last few centuries has the struggle with the sea been more successful than it was formerly.

On the northern and the south-western sides of the island some land has been gradually recovered from the sea. In these quiet corners of the island the sea deposited a layer of clay against the old sea-dikes. As soon as the level of these new lands was high enough they were enclosed with a dike, freed from excess water and brought under cultivation. This growth of the island has continued up to the present time and this year operations will be started for the reclamation of a new polder of approximately 400 hectares, which will be added to the island (see map N^o. 1).

From a soil-scientific aspect these new polders (dating from about 1600) are of a fairly even structure. Their profile invariably shows a layer of clay or sandy clay of a thick-

ness of from 0.5 to 1 metre resting on sand. The surface is very flat.

The old parts of the island, the origin of which has been described above, show greater differences.

Roughly, half of this nucleus, which has an area of approximately 15,000 hectares is made up of basin grounds. These have a layer 1 or 2 metres thick of heavy limeless clay resting on peatmoor. In consequence of the settling of the soil this peatmoor was reduced to a layer no more than from 0.5 to 2 metres thick and besides, in many places it has been excavated. The lands lie relatively low, mostly no more than 1 metre above the level of the polder water. As a matter of fact, deeper drainage is not desirable, because the peat layer might react disturbingly.

Owing to the heaviness of the clay and the unevenness of the surface this soil is hard to cultivate and is consequently chiefly used as grassland.

The ridges, however, (the former creeks) which are situated higher and vary from some tens of metres to 1 kilometre in breadth are eminently suited for crop farming. The regular bulges of the ridges cause no obstruction. The profile of the oldest ridges consists of light sabulous clay poor in lime, of a thickness of 0.5 to 1 metre on sometimes rather coarse sand. The ridges which were formed last have a cover of calcareous clay also resting on sand.

The only obstacle which is occasionally met with is found in the oldest ridges; because their surface lies as much as 2 or 3 metres above the watertable and the subsoil often consists of coarse sand, this may be detrimental in drier periods.

Therefore, control of the watertable is essential in the Isle of Walcheren to attain a maximum productivity of the soil. The difficulty, however, remains that differences in height of the soil may give rise to variance in interests, while, also, it has appeared impossible to raise the watertable to the desired level in the sandy ridges, which wind through the landscape as rather narrow strips. In the basins many ditches and gullies are found, which cross the ridges only in a few places.

About 20 years ago the drainage of the island was still entirely regulated by means of sluices which, at low tide, drained off the superfluous water to the sea. This mode of drainage was quite inadequate and in rainy periods (in winter) the lands in the low-lying basins were inundated. As a result of these conditions, which had

prevailed for centuries, the basins were unsuitable for human habitation. Therefore the houses of the inhabitants were exclusively built on the ridges. On the highest parts (often raised artificially for safety in the event of inundations) the villages were built. Accordingly, all the principal roads run along or across



the ridges. The roads that cross the basins, however, are of little importance and are in rather bad repair.

It stands to reason that these circumstances largely account for the present agricultural conditions, which have, in fact, been adapted to the natural conditions. The erection of an electric pumping-station has helped to correct natural conditions.

II. — THE AGRICULTURAL STRUCTURE OF WALCHEREN BEFORE THE 1944 CATASTROPHE

The normal development of the island was temporarily interrupted by the outbreak of the war in 1940.

The island then had an area of 20,000 hectares and 40,000 of its 70,000 inhabitants were centred in the towns of Middelburg and Flushing. The 17 small municipalities in the country-side had an aggregate population of 29,000, 90 per cent. of whom were directly or indirectly engaged in agriculture.

Consequently, agriculture is one of the principal means of subsistence in Walcheren.

The available area is very intensively cultivated and is divided as follows :

Arable Land	8,865 hectares
Grassland	7,775 »
Orchards + gardens	695 »

These figures clearly demonstrate the impor-

tance of livestock keeping in the island. Not only is half of the cultivated area used as grassland, but also a considerable part of the arable land is utilized for livestock, especially cattle, farming.

Given the nature of the soil, most farmers use ridge-as well as basin-lands and, consequently have both arable and grassland at their disposal, with the result that mixed holdings predominate.

It is typical of Walcheren that the agricultural area is split up into many small plots which account for the many small-holdings which are found in the island. Indeed, many of these holdings are so small that the farmers are compelled to work on other farms in order to earn their livelihood.

These conditions have developed in the course of time and are mainly due to the devotion of the Walcheren farmer to his native soil. In spite of the increase in the population every one doggedly stuck to his land.

The following table gives a clear idea of the utilization of the soil in the inundated area in 1940.

Size of the farm	Number of farms	% of the available cultivated area	Users of the soil mainly engaged in agriculture or horticulture.
0-1 ha.	1 488	3.5	172
1-3 ha.	746	14.3	192
3-5 ha.	237		
5-10 ha.	296	14.1	282
10-20 ha.	341	33.7	341
20-50 ha.	176	32.7	176
more than 50 ha.	4	1.7	4
Totals	3,288		1,167

The situation which had thus arisen had already long been considered unsatisfactory, as the split-up landed property and utilization of the soil stood in the way of an economic exploitation of the soil. This disadvantage increased along with the growth of the population and the attendant need for an increase in yield and a decrease in costs.

After the 1944 catastrophe, however, there was an opportunity for reform. A series of

measures in the cultural technical field, aiming at the improvement of economic farm management, is under consideration.

III. — THE DESTRUCTION OF WALCHEREN IN 1944

The background of the disaster.

In the month of September of the year 1944 Antwerp was taken fairly undamaged by the Allied forces. The free disposal of this important port of supply was an essential factor for winning the war in Western Europe. Therefore the mouth of the Scheldt, the gateway to Antwerp, which was still in the possession of the Germans had to be liberated as soon as possible.

In this connection the conquest of Walcheren, which through its position controls the mouth of the Scheldt, was essential. In the last few years of the war the island had been transformed into a virtually impregnable fortress. No other course was open to the Allied forces but to resort to bombarding the dikes, as a result of which the island, which for the major part lies below average sea level, would be inundated and the bulk of the German fortifications would be put out of action.

The inundation.

So Walcheren had to be sacrificed for the liberation of Western Europe. In the early part of October the dikes gave way in four places under violent Allied bombardments, the water rushed in and shortly afterwards the fertile island was transformed into a turbulent inland sea.

About 80 per cent. of the total cultivated area, or 14,500 hectares were inundated, the water rose from 4 to 7 feet and only the range of dunes and some nuclei of villages which lay on the ridges remained dry.

The results.

The new state of affairs had numerous specific consequences. In contrast to other parts of the Netherlands which had been inundated by the Germans by opening the sluices, the Walcheren inundation was uncontrolled.

The four gaps in the dike, the breadth of which varied from 400 to 1,100 yards and the depth from 36 to 81 feet, provided an open communication with the sea. The great tidal differences in the North Sea (approximately 10 feet) gave rise to powerful currents in the

gaps of the dikes causing systems of gullies (creeks) to be formed just as had taken place in former, natural inundations.

The following figures may give an idea of the enormous displacement of water caused by the dike-bursts. (see map No 2) :



Place of dike-burst	Inflow at high tide (in million gallons) twice a day	Outflow at low tide (in million gallons) twice a day
Nolledijk	5,000	2,200
Westkapelle	600	400
Veere	3,000	6,000
Rammekens	5,500	5,500

From these figures it may be readily understood that the difference in the quantities of inflowing and outflowing water caused powerful currents across the island.

These currents particularly affected the fields which had been ploughed just before

the disaster. In these fields the upper layer of precious mould was washed off by the water. It is true, in some cases this mould was deposited again on other fields, but, especially in the vicinity of the gaps, much material was carried off to sea for good and all. In addition, the tidal currents carried along great quantities of sand, which was deposited in layers up to 4 feet thick on the fields in the neighbourhood of the newly formed creeks.

So losses of cultivated area are due to :

- the formation of creeks
- washing off by tidal currents
- deposits of sand.

In addition, when the gaps were filled up the new dikes had to be built more inland so that rather a considerable area came to lie outside the dike and was also lost.

The aggregate area of the land which has thus been lost for crop farming either permanently or for a very long time is estimated at 900 hectares.

The damage done, however, was not confined to what has been described above. More than 500 farmhouses, stables and sheds were destroyed by the waves; most of the roads were swept away or sunk; the rich vegetation of the island including high wood fell a prey to the destructive effect of the salt water.

Very serious damage was done to the extensive network of watercourses and ditches, which in normal times were of primary importance for the regular drainage of this low-lying area.

Most ditches were completely silted up, and as the ditches often serve as lines of demarcation it often seemed impossible to retrace the boundaries of the fields when the island had been drained.

IV. — THE FIRST STEPS IN THE RECOVERY OF WALCHEREN

A. REPAIRING THE DIKES.

Several publications have already appeared on the gigantic work of filling up the gaps in the Walcheren dikes, so that this subject need not be dealt with at length in this publication. It may suffice to mention that partly owing to the aid of the Allied forces, who put large quantities of material at our disposal, including caissons of the artificial harbour of Arromanches in Normandy as well as concrete beetles and torpedo boat nets, it was possible to fill up three of the four gaps within one year, *viz*, in October 1945, the closure of the last gap taking place in February 1946 (see map No. 2).

The greatest difficulty was the control of the above mentioned tidal currents which increase in force according as the filling up of the gaps draws to a close. The closure once having been completed, the superfluous water could be carried off through the sluices

at low tide and by putting the electric pumping-station in operation.

B. AGRICULTURAL RECOVERY.

After the draining of the island the agricultural side of the recovery at once came to the fore.

Since not only Walcheren, but also other parts of the Netherlands (in all, 77,300 hectares) were inundated by salt water the Government considered a scientific investigation essential for an adequate recovery.



Deterioration in structure through salty inundation

First, soil maps were made on an agrogeologic basis. The genesis of Walcheren, as outlined above, has been taken from the report on the investigations carried out after the war by the Institution for Soil Mapping at Wageningen, which made an accurate soil map of the island.

Removing the salt.

An extensive salt test was carried out by the laboratory of the North-Eastern Polder at Kampen and Goes. The reaction of the crops was studied by the Scientific Section of the Government Service for Agricultural Recovery, which coordinated all investigations. As soon as practicable, the results of the investigations were disseminated among the farmers by the Government Agricultural Information Service.

Two problems have to be faced with regard to land flooded by sea water.

1. The removal of the redundant salt (particularly NaCl) from the soil water.

2. Recovery of the number of ions of the soil complex as the latter contains too much Na (and Mg) after the inundation.

The first point is important because large quantities of salt in the soil render crop growing impossible. Not until the salt concentrations have sunk to a certain level can farming be started again. As a matter of fact, all vegetation was killed off as a result of the inundation.

For 4 years field experiments were carried out to determine the limits at which the various crops could still reasonably develop.



Walcheren in the process of draining

In accordance with the results in other salt areas in the world it was found that barley and sugar beet, which are the most salt resistant crops were followed by oats, wheat and grass. Pulses appeared to be very susceptible to salt.

The Netherlands lies in the North European podsol area so that the excess salt is readily washed off by the normal rains in winter. In from 2 to 4 years the salt-concentrations of the soil water closely approached the normal level. To this end, however, the rainwater which sinks into the earth and takes the salt along, should be readily carried off. Accordingly, during 1946 and 1947, from 1,000 to 1,500 labourers with the aid of draglines dug up 1,500 km. of watercourses and ditches which had been silted up. In addition, the farmers were encouraged by premiums to dig their own ditches, and this soon became their principal occupation in the early period after draining when the land was not yet suited for

cultivation. By the end of 1947 the drainage system worked at about normal capacity again, thus greatly expediting removal of the salt.

It is evident that the high-lying, light ridge soil lost its salt more quickly than the low-lying basin soil, but by 1948 also the major part of the latter was again used as grassland.

As early as in 1946 a part of the ridge soil was again under successful cultivation.

After an extensive soil investigation it was possible to advise the farmers which crop might best be grown on each of their fields.

Structure and gypsum.

During and after the disappearance of the salt soil-water it is found that the soil is seriously damaged through too high an Na-content of the soil (-absorption) complex.

The crumb structure, which is ideal for clay soils is destroyed, because calcium has partly been replaced by sodium (and magnesium).

The binding of sand, clay- and mould-particles in the crumbs has disappeared and the mechan-



Reclamation operations: digging a new main water canal

ical action of the rain causes the crumbs to fall asunder into separate particles which stick so closely together that the ground becomes quite impermeable. In wet weather pools are formed in the field; in dry weather

the upper layer becomes stone-hard while the soil under the furrow long continues to resemble tough paste.

Deep tillage aggravates these phenomena, while the evil manifests itself even more seriously according as the soil contains more clay. From former experience it had been concluded that in such cases recovery is effected in from 5 to 10 years.

Therefore the Government resolved to purchase gypsum in Belgium, Luxembourg, France and the Netherlands; in the Netherlands, after former inundations, the application of gypsum appeared to accelerate the process of recovery.

Many experiments were made in order to ascertain the right quantity of gypsum for all types of soil.

Accordingly, 53,000 tons of gypsum supplied by the Government free of charge, was applied by the farmers. For every field the right amount was fixed on the basis of the clay content.

Where the advice was followed accurately, good results were obtained so that, to a certain extent, the former yields were again attained. But for this application of gypsum these results would not have been attained in so short a time.

Grassland.

No applications of gypsum were given to the former grasslands, as it appeared that the enormous supply of mould had prevented the deterioration of the structure.

For the grasslands a quantity of lime-marl was made available to supplement the shortage of lime. The grass seed required for re-sowing was also provided by the Government. In spite of difficulties arising from a luxuriant salt vegetation, a severe winter (1946-1947) and a dry summer (1947), which often necessitated additional sowing, the complete recovery of the grassland may be confidently expected. As grasslands are resistant to a moderate quantity of salt, the fact that many grasslands (which, naturally, are situated in the low-lying basins) are not yet quite desalted, is not alarming.

Lucerne.

Great attention was also paid to the growing of lucerne. This crop has the property of suspending the tillage of the soil for some years, which is an advantage in view of the structure of the soil.

In 1947 more than 1,200 hectares were sown with this crop, which amounted to approximately 20 per cent. of the former arable area of the inundated lands. A cooperative drying plant for green fodder was established for the remunerative treatment of the harvested product.

The rebuilding up of the livestock population.

The Walcheren livestock population which, in 1939, numbered 13,500 in the area which would afterwards be inundated had decreased to 770 milk cows in 1945 owing to the war conditions and evacuation. The Government replaces the stock killed and removed. The rate of this compensation depends on the rate of recovery of the food basis *i.e.*, the grassland, from which it follows that the rebuilding up of the livestock population will have to be extended over several years.

In the given circumstances an endeavour is being made to have the livestock population entirely free from tuberculosis. Only perfectly healthy animals are purchased while the reactors have been culled from the herd. The health service which was recently set up exercises close supervision on the maintenance of the high standard which has now virtually been attained.

REALLOCATION

1. — *Why reallocation.*

During the inundation it was already considered whether it would be advisable to restore in Walcheren the conditions prevailing before the disaster.

Former conditions far from ideal. As stated under II the agricultural structure of Walcheren was anything but ideal. Considering the extent of the damage the recovery

of this former state would have required large sums. Would it be possible, if need be at higher cost, to achieve improvement?

From the outset the possibility of reallocation was contemplated. The scattered position of the parcels belonging to one owner and the difficulty of access were outstanding evils in the Walcheren community. Reallocation and building of roads would certainly improve the state of affairs.

Through reallocation fairer apportionment of damage. Further, without reallocation many farmers would suffer because a large part of their land had been swallowed up by the sea or the creeks. A refund of the capital value of the lost property would provide adequate compensation neither to the tenants nor to the owners.

At any rate, reallocation would ensure that the total loss of land would be borne equitably by all concerned.

The funds required for recovery may be spent on improvement. Reallocation would clear away the inconvenience of the old water-courses and new ones could be dug in the right places and of the right size. This was already taken into account in the preliminary planning for recovery as described under IV B.

Reform of small-holdings. However, in order to arrive at the same time at a reform of the uneconomical small-holdings, it should be possible to enlarge these farms.

To this end the possibility was raised of allocating farms in the new Zuyderzee Polder (the North Eastern Polder) to some Walcheren farmers. As a result more land would be available for reallocation among the remaining farmers in Walcheren. On the one hand, the larger area thus obtained would compensate for the ground lost through inundation, and on the other, it might also serve for the enlargement of the above-mentioned small-holdings, which are not socially and economically justified.

In view of these facts, the government resolved to proceed to reallocation and general reform in the isle of Walcheren.

II. — *How reallocation was achieved.*

Reallocation generally takes place in the Netherlands according to the reallocation Act. This Act, however, does not provide for the reform of very small-sized farms.

Therefore the procedure for land reform in Walcheren was regulated by special legislation.

Although this reallocation was introduced by the Government, the initiative not being taken by the inhabitants of Walcheren (or the land owners), the population generally agreed to this regulation as it was realized that no other solution was possible.

III. — *Basic principles of the Act.*

Apportionment of the soil according to brought-in value. By appraising the value of the soil before the disaster the total value of all the land to be reallocated is ascertained and the percentage 'brought in' by each individual farmer is calculated. After the reallocation, the land allotted will be valued again. Every owner will get back a value in ground or money on the basis of the percentage of the land brought in.

This final settlement should be made as far as possible in terms of land.

The valuation was made after an extensive soil scientific investigation on which local experts also worked.

The possibility of a settlement in terms of money instead of in terms of land has been created to prevent parcels from being allotted to such persons as have no reasonable interest in them, *e.g.*, when the allottee would not be in a position to carry out efficient tillage.

The building of roads and digging of water-courses. The provision of the law that every parcel must have access to the highway is of great practical advantage. Further, it has been prescribed by law that every parcel must be given the benefit of adequate drainage.

The establishment of farms in the North Eastern Polder. For the reasons stated above it is considered essential that users of land should be transferred to the new Zuyderzee Polder, the North Eastern Polder.

The farmers who are eligible for transfer by virtue of certain provisions of the law are notified. Those who accept must give up their right of *use* of the Walcheren soil. Owner users do not lose their proprietary rights, but they are under the obligation to lease their land to tenants to be designated by a special committee (Reallocation Committee). In the event of tenant-farmers going to the North Eastern Polder the lease of the Walcheren land is terminated.

In this way the land is liberated for the reform of the holdings. A total of 3,000 hectares will thus be liberated and reserved for Walcheren farmers. If it should not be possible to make a sufficient portion of soil available on a voluntary basis, the Reallocation Act provides that :

(a) a lease can be terminated and the tenant can be excluded from the right of using Walcheren soil.

(b) an owner-user can be compelled to lease the land belonging to his farm. If the tenants or owners-user should incur damage through these measures, the damage will be made good.

The reform of holdings which are not socially and economically justified is such an important part of the reallocation work, that there should be no risk of not enough land voluntarily becoming available. Accordingly, the law should allow for compulsory measures.

As sufficient interest is being shown in the settlement in the North Eastern Polder it may be assumed that there will be no need to take these compulsory measures.

IV. — *Execution of the work.*

Organization. The work is carried out by the above-mentioned Reallocation Committee. This Committee comprises Government and provincial officials and representatives of the Walcheren farmers and farm labourers.

The Executive Committee works under the supervision of the Reallocation Committee and is composed of three members.

The Reallocation Committee is responsible to the Minister of Agriculture, who is assisted

by a Committee of Supervisors consisting of official members.

Execution. The building of roads and the digging of watercourses has already been started in continuation of the provisional recovery work.

According to plan, a total length of approximately 250 km. of country roads and 55 km. of highway is to be constructed. The country roads will have a crown width of 8 or 9 metres the width of the paved road being 3 metres.

The substratum of the country roads will chiefly consist of debris originating from destroyed buildings of the Isle of Walcheren, of the town of Arnhem and of other war-damaged places in the Netherlands. Even the debris of the German towns is used for this purpose.

On 1 January 1949 the substratum of 90 km. of country road had been constructed and an additional 55 km. had been put out to contract. It is expected that the road system will be completed in 1952.

For drainage 239 km. of main ditches had to be dug out. On 1 April 1949, 94 km. had been completed and 50 km. were under construction. The roads and watercourses are made with the aid of machines. The work is put up for tender and carried out by the contractor according to specification.

The formation of new parcels necessitates the filling up of old ditches, while for the drainage on the boundaries of the future parcels new ditches have to be dug out.

A beginning has already been made with the filling up of the old ditches. For this purpose the excavated soil of the new main ditches and road ditches is used. This material is worked partly with the aid of bulldozers, scrapers, traxcavators, draglines and dumpers. Since the structure of the soil, especially of the subsoil is still poor owing to the inundation with salt water, great care must be taken when machines are used.

An appreciable part of the work is done by hand, as it appears that the mechanical compression and kneading of the soil greatly hamper the recovery of the soil.

To ensure an adequate drainage of the parcels some thousands of hectares of land will have to be drained. The filling up of the old ditches

and the extension of the parcels have necessitated the construction of a drainage system.

The extension of the parcels which includes improvement in their lay-out is an essential part of reallocation as the large number of small parcels hindered the development of mechanization.

Scientific investigation. A staff of scientific investigators is employed to solve the many problems which have arisen during the execution of the work. *Inter alia*, they try to find out the best methods for working the soil, the right distances between the lines of drains and the most suitable depths of drainage.

Measures relating to the drinking-water supply of the livestock. A special committee has been charged with the investigation of the drinking-water supply of the livestock. Formerly, in many districts of Walcheren, especially in the low-lying pasture areas the water was saltish. Old wells have been silted up. Therefore the Reallocation Committee is considering the construction of a system of water-pipes. Provisionally, Norton pumps have been installed. The fresh water supply to the pastures by means of tanks is a costly affair.

Replanting. The old system of tree and hedge planting is not considered desirable. It is true, the many hawthorn hedges which formerly enclosed the parcels provided adequate protection from the strong salt sea wind, but, for all that, they meant loss of land.

In accordance with the plans of the State Forest Administration the roadsides are now being planted. In all these plans the nature of the sub-soil and the general requirements of scenery are taken into account. In some places, especially in the vicinity of the dikebursts and along the dunes, woods are being planted.

So far 13 km. of road and 16 ha. of woods have been planted.

Location of the farms. In view of the allotment of the land which will be started in 1951, it is being investigated in what places the destroyed farms may best be rebuilt. Formerly many farms were situated in the vicinity of the villages. The present aim is to locate the farmhouses in the middle of the land belonging to the farm.

In the allotment of the land not only is the size of the holdings fixed, but also the use of the land. If necessary, a lease may be prescribed for this purpose. The possibility of a compulsory lease is considered essential in order to arrive at an effective reform of the holdings.

Present and future results of reallocation. As a result of reallocation the agricultural structure of Walcheren will be changed. No doubt, this will entail difficulties for those concerned. Therefore the organization of the farmers and farm workers will, with Government support, establish a pilot farm for giving information on modern farm management to the Walcheren farmers.

The aggregate cost of the Reallocation amounts to several tens of millions of guilders. The contribution of the land owners in relation to the increase in value of the soil will constitute only a small part of this amount.

As, however, the whole plan fits in with the long term agricultural policy there has been no hesitation in appropriating large sums for the reallocation of Walcheren, in the firm conviction that the capital now invested and still to be invested will yield interest so that the 'Walcheren block' will be able to work in the future with considerably lower farm costs.

In the foregoing an attempt has been made to show how, through reallocation and reform, the chaos of ruins and mud to which Walcheren had been reduced will be transformed into a well-organized agricultural entity.

HOW SCIENCE HELPS AGRICULTURE

by **Sir James Scott Watson**

Chief Scientific and Agricultural Adviser to Britain's Ministry of
Agriculture and Fisheries, and Director General of the National
Agricultural Advisory Service

THE ORGANIZATION OF RESEARCH IN BRITAIN

Although agricultural research in Britain is to a large extent financed and co-ordinated by the State, only a few of the research centres are actually run by the State. Most of them are under independent governance and some are associated with particular Universities; and they often have limited funds of their own which are supplemented by State grants.

There are actually three organizations concerned with financing agricultural research and co-ordinating the work of the several centres in Britain: — the Ministry of Agriculture and Fisheries (covering England and Wales), the Department of Agriculture for Scotland, and the Agricultural Research Council, whose responsibility extends to the whole of the United Kingdom.

FARMING — AND SCIENCE

The Ministry of Agriculture and the Department of Agriculture for Scotland, as part of their general responsibility for agricultural improvement and development, are concerned with the application of science to farming, primarily a problem of agricultural education, and the organization of advisory work, and with the acquisition of new scientific knowledge which can in turn be applied to practical farming.

Except where special considerations obtain, however, the Departments have adopted the principle that agricultural research staffs who are to devote themselves to the pursuit of new knowledge should not be employees, subject to close official direction and control,

but should, so far as possible, have the freedom proper to the scientific worker to pursue his enquiries as he will. Accordingly their policy has been to support and develop the several independent research centres which have grown up over the years, such as the East Malling Horticultural Research Station, and the Rothamsted Experimental Station, the oldest agricultural research institute in the world and now the largest in Britain. In all there are 26 State-aided agricultural institutes in the United Kingdom, 15 engaged on plant and soil research, ten on animal research, and one on agricultural engineering research.

While the Agricultural Departments provide the financial support and administrative supervision, the scientific oversight and co-ordination is the task of the Agricultural Research Council. The Council was created by Royal Charter in 1931 and is one of three organizations — the others being the Department of Scientific and Industrial Research and the Medical Research Council — which have been set up under the Lord President of the Council to promote scientific research on all problems affecting the life and activities of the nation. These three sister bodies maintain close liaison since their fields of work necessarily touch one another.

TWO DISTINCTIVE FUNCTIONS

By the terms of its Charter, the Agricultural Research Council is charged with the general organization and development of agricultural research in Britain. This gives it two distinctive functions. First the Council acts as adviser to the Ministry of Agriculture and the

Department of Agriculture for Scotland on the scientific programmes of work at the research institutes and on their staffing, their equipment and their budgets. Secondly the Council is provided with its own funds from the State which it is free to spend on research of its own. As a result, the Council has set up seven institutes and units with the object of filling important gaps in agricultural research work, or of providing certain experimental facilities that do not exist elsewhere. Three of these cover research work on plants and soil: the Plant Virus Research Unit, the Plant Biochemistry Research Unit, and the Insect Physiology Unit, all of them at Cambridge; four are concerned with research on Animals, the Institute of Animal Physiology, the Animal Breeding and Genetics Research Organization, the Poultry Research Centre, and the Agricultural Research Council Field Station.

The Council also employs individual scientists to investigate specific problems, such as potato disease and storage, and makes a number of special research grants to other bodies, including University Departments, which may engage in agricultural research in association with their teaching work.

TO STIMULATE DEVELOPMENT

These special research grants are made for a limited period — usually not more than three years — and are intended to supplement the normal resources of the body receiving the grant in such a way as to stimulate and coordinate attacks on new problems or the development of new methods. One of the advantages of this method of financing research is that it enables promising lines of work to be initiated or developed on a small scale at the outset. It may also enable University teachers to pursue researches of importance to agriculture beyond what is possible on the normal provision for research within a University.

Another branch of the Council's work is to award annually a number of studentships and training grants to selected Honours graduates to enable them to obtain post-graduate training to fit them for a research career.

The Council consists of persons appointed because of their qualifications in one or another of the basic sciences underlying agriculture, or because of their general experience and interest in agriculture. The services of the members are voluntary. They are appointed for a term of years and three retire each year. The Council meets every other month.

Much of the more detailed business is conducted through Standing Committees. There is one for research affecting plants and soils and a second for research affecting animals. Membership of these Standing Committees, which meet six times a year, is not confined to Council members. A third Standing Committee has recently been appointed to co-ordinate and guide agricultural engineering research, a subject for which the Council has now assumed responsibility.

Under these Standing Committees, there is a number of Technical Committees or Conferences responsible for reviewing programmes and co-ordinating existing research and planning new research in a particular field, for example tuberculosis, mastitis, pig diseases, weed control, fertilizer application and mineral deficiencies. Meetings of these Technical Committees and Conferences are attended by many of the research workers from different centres engaged on the work in question. The Soil Survey of Great Britain also comes under the general supervision of the Council, and for this purpose a Soil Survey Research Board has been set up.

COSTS £ 1,600,000 A YEAR

Annual maintenance expenditure from public funds on agricultural (including horticultural) research is at present about £ 1,600,000. Plants and soils research accounts for some £ 670,000 and animal research for £. 660,000, and the balance represents expenditure on agricultural engineering research and on miscellaneous projects.

The work on problems relating to plants and soils covers a wide field and includes the investigation of soil fertility, crop nutrition and physiology, plant pathology, plant breeding and genetics and grass husbandry. These subjects account for about 80 per cent. of the total

expenditure in the field of plants and soils ; and the balance is spread over such subjects as spectrochemistry, weed control, microbiology, nematology and plant biochemistry.

Within the field of animal research some 50 per cent. of the expenditure is allocated to the study of animal diseases. Research on animal physiology, animal breeding and genetics, and dairying accounts for most of the rest. There are something like 700 scientific workers (excluding experimental officers of all grades)

engaged on State-aided agricultural research.

The agricultural research organization in Britain is not in any way isolated from the advisory services concerned with the application of science to farming. There is, indeed, close contact at several levels, and the advisory services are to have a number of centres for experimental work which will also serve as out-stations for the research institutes. A description of these arrangements would, however, require an article in itself.

P O R T W I N E

by **J. J. DA COSTA LIMA**

Director of the Port Wine Institute, Oporto

Portugal is a country where the vine reigns supreme.

Owing to the pronounced diversity of its soil and capricious orography, land tracts presenting identical agro-climatic features occur in a very restricted number. Consequently, the high production of wine is characterized by an almost endless variety of types — some of current quality, but many of undeniable outstanding grade, even unique in the world.

Amongst the latter, Port Wine should be singled out as a star of the first magnitude. It is well known under the designation of Port all over the world because it is shipped from Oporto ; but it hails from the wine-region in the Douro valley, which is some 40 miles distant from the sea coast — a region set on lofty hills, of granitic summits, but mostly composed of friable schist rock, stratified in an inclined direction as the result, no doubt, of seismic convulsions in very remote eras.

Oporto is the name of the seaport whence the wine is shipped, on the bar of the river Douro, which flows into the Atlantic Ocean.

The generous wine of the Douro — a veritable caprice of Mother Earth — was christened a few centuries ago with the name of the town where it is stored and matured by the merchants who ship it to markets abroad.

I have called it ' a caprice of Mother Earth ' and, in fact, it is so. The making of it is neither difficult nor does it hold any secrets. In terms of oenological nomenclature, it might be described as under the generic denomination of a high strength or fortified wine — which all wine-growers, producing musts moderately rich in sugar, are in a position to make through the addition, at the right time, of a given amount of grape brandy.

It is true that in the making of Port Wine certain stocks of grapes are recommended as the most suitable ; their number is rather high — about 17 out of the red kind and of the white — but all them are capable of producing Port. It is nevertheless a matter for wonder that, even in Portugal, if any of those stocks is grown outside the typical Douro region, musts are obtained which bear no comparison whatsoever to the luscious, full-bodied, deep-coloured juice yielded by the Douro valley vineyards.

So, Port is, really and truly, a caprice of Nature, because in the wine region of the Douro a given number of peculiar features are reunited which the Almighty did not care to reproduce on any other part of the Globe where the vine is cultivated.

Its glaring fame has surpassed the boundaries of the country of origin and spread all over

the world more than 300 years ago. Many learned people have scrutinized the Douro valley, studied and described in writing and by word of mouth, and pictorially, this wonderful land. The fascinating sketches due to the masterly hand and artistic make-up of Joseph James Forrester, the author of the most elaborate and best drawn orographic map yet of 'the Alto Douro wine-country' as he described it, claim universal praise and admiration.



After the grapes are picked and the wine is made, it is up to the merchant to let it mature in suitable conditions.

Herein lies the secret of Port !

Everybody is at liberty to imitate or even to copy our technical methods, which are kept hidden from no one. But one detail do we reserve to ourselves — natural conditions in respect of soil and climate, which we owe exclusively to the Mercy of God.

Just to give an idea of the nature of such conditions, let it be said in passing that the spontaneous flora of the Douro comprises,

besides its own peculiar types, specimens of the Atlantic and Mediterranean zone in conjunction with those of the Iberian plateau. The Douro land is indeed a blessing from Heaven !

Before the War, when the foreign trade of Portugal was transacted under normal conditions, our wines represented one of the chief values of our exports — more than 25%. Port alone contributed about 75% of the total exports of Portuguese wines, or in other

words, Port wine was responsible for about 18% of all our metropolitan foreign trade.

The mere citation of these figures illustrates the all-important position occupied by Port in Portuguese economy and more than justifies the keen interest of our Government in its production and trade.

Once the high significance of Port wine in our economy was recognized, the primary concern of our authorities was to legally define the product on a sound and unmistakable basis, this being the reason why the designation of *Port Wine* has been linked up, for nearly

2 centuries, by law, to the upper Douro wine-region where it is grown. (Establishment of Pombal's Wine Company in 1756 and regional demarcation started in 1758).

I presume this is the first instance of a regional demarcation in the world, which was seriously conceived and carried out and strictly controlled in order to safeguard the genuineness and, therefore, the reputation of a given wine brand — The PORT trademark.

Backed by so many years of experience and tradition, Portugal is indeed the forerunner of the international protection granted by some countries to regional wine designations based upon the agro-climatic characteristics which are peculiar to the producing regions.

Apart from the economic factor, the thorough and efficient manner in which the demarcation of the Douro wine-region was undertaken and brought about in far distant times appeals to one's curiosity and admiration. One has only look at the 'Pombaline landmarks', made of granite monolith pillars 2 metres high, well driven into the ground, here and there, all round the delimited wine-area. More than one hundred of these landmarks were erected in the years 1758 and 1761. They are still venerated today, and justly and proudly so, since they were officially classified recently as monuments of public interest.

Once the *trademark* was well defined, *i. e.*, the right to its use as applied to the wines grown in the demarcated region definitely established, a series of legal measures ensued with a view to the guarantee of its origin and superior quality.

Among them, the following claim special attention, *viz* :

(1) Wine stocks allowed in the structure of vineyards ;

(2) Methods of cultivation ;

(3) Prohibition of entry in the wine-region of grapes, must or wines grown and produced in other areas ;

(4) Conditioning of vinification methods and transit of wines ;

(5) Creation of the 'Gaia Entrepôt', on the left bank of the river Douro, opposite the town of Oporto, the only locality in Portugal wherein the generous wines of the Douro

may be stored. There they are kept, matured and prepared for export under the strict supervision of the Port Wine Institute.

(6) Tasting of all wines for sale, whether in bottle or bulk, both in the domestic market or for export.

(7) Issuing by the Port Wine Institute of Certificates of Origin (also Seals of Guarantee for wines bottled at the origin) whereby the genuineness and quality of the wine sold under the name of Port are officially guaranteed.

It was decided, however, to go a step further.

It was thought that the part played by Port in our economy called for a broader intervention than the one afforded by the guarantee given to the purity and quality of the wine to be shipped under the denomination of 'Port'. Permanent assistance to the wine-growing industry and to Port shippers was envisaged in order to protect their legitimate interests.

But how to do it ? Through the direct action of the Government ?

In accordance with the new conception of the Corporative System of Portugal, whereby all state formulas are repudiated, it was thought advisable to entrust the very wine-growers and merchants with the study of their own problems and the safeguard of their own interests. And thus the 'Casa do Douro' — the federation of all the wine-growers of the legally defined Douro region — and the 'Gremio dos Exportadores de Vinho do Porto' — the association of all Port Wine shippers — were evolved.

The Government appropriated the basic functions of arbitration and control, which are exercised through the medium of an organism of economic co-ordination — the Port Wine Institute, as well as those functions of general interest which our authorities are best placed to discharge successfully, such as the international protection of the Port trademark, scientific research works and technical assistance inherent in the Port wine trade.

On this principle, both the private interests of each individual and the general interests of which the Government is the natural guardian, are examined and considered in respect

of the problems that may arise in a spirit of mutual understanding that it would be hard to find otherwise.

I cannot resist the temptation of stating how this organization works.

The Institute is governed by two superintending bodies — a Board of Directors and a General Council. The Directors discharge, day by day, all services ascribed to them by the Institute's organic law. To the General Council, which meets, at least 12 times a year, is committed the appreciation of all problems pertaining to the economy of Port Wine, and specifically, the fixing up of certain rules that govern the relations between the Douro wine-growers and the Port shippers. The Directorate of the Institute (one Director and two Joint-Directors) sit on the General Council which is presided over by the former's Director.

I would hate to say that to conduct the business of a General Council as outlined above is an easy-going proposition. However, when the desired agreement in the discussion of a given problem is not reached, I have always deemed it convenient to postpone a definite decision and to call a further discussion at a fresh meeting after endeavouring, in preliminary session, to iron out the conflicting points of view.

In this connection it should be pointed out that the Institute has, more than once, submitted to the Government plans of regulations passed by its General Council which have been approved 'in toto' and thus published in the Official Gazette. This affords, I daresay, a striking example of the close co-operation existing between the Government and the parties concerned.

To be sure, the authorities, through the Corporative Organization in force, dispose of reliable data which enable them the better to grasp the problems connected with the economy of Port Wine; and, on the other hand, the interested parties are thus able to lodge their claims and to formulate their requirements through the proper channels.

Neither economic liberalism, wherein the Central Power is ignored by the trading activities of the nation, nor superintendence of the State in which economic directions are imposed irrespective of the interests at issue.

On the contrary, through the Portuguese Corporative Organization, the possibility of a comprehensive and efficient interventionism is assured which I might be permitted to describe as 'hand in hand'.

A vivid example of the co-operation referred to above is furnished by the original scheme, set up 10 years ago, of the financial assistance to the Port trade, which represents a very fortunate solution of a difficult problem.

The war had not been declared yet — and how unsparing and enduring it was! In May 1939, the Official Gazette published a decree whereby certain credit facilities were granted to the Port trade in Gaia.

The novelty of the system resided in the fact that, as from that date, Port Wine could no longer be pledged. Why? Because, according to this new scheme, all Port stored by shippers within the 'Gaia Entrepôt' was given as the guarantee of a document issued by the Port Wine Institute, which was modestly termed 'Certificate of Stock'.

The issuing of the 'Certificate', at the request and in favour of any shipper, is incumbent upon the Institute, because this is the official body that supervises all wine stocked at the 'Entrepôt' through current accounts with the shippers, checked from time to time, wherein all wine is entered or written off as the case may be.

As a result of this credit proposition, if and when a shipper wants to raise money on his wine, all he has to do is to apply to the Institute for a 'Certificate of Stock' wherein a given quantity of wine available and its value are certified.

The Institute, through its services, verifies the quantity and good quality of the wine and hands over the 'Certificate' to the shipper who discounts it with any bank or credit establishment.

The fact is worthy of note that, so far, all 'Certificates of Stock' have been discounted at their face value.

This extremely simple credit device allows of the wine being freely moved from one container to another inside the same warehouse, an essential factor in the manipulations required by the wine in its ageing process and in the

preparation of parcels for sale and shipment abroad.

The apparently unimportant detail whereby the wine changes its container and is thus allowed to circulate freely inside the warehouse, precludes, of course, the identification of the wine given as a guarantee. This led up to a system dispensing with such an identification, which consists in binding the quantity of wine and not the wine proper.

It is true that to bind a given amount of wine by means of current accounts is easy enough, but it is no less certain that the procedure involves a great deal of responsibility. Only the efficiency of our Corporative Organization could be instrumental in bringing about such a practical scheme.

Should any shipper fail to meet his obligations in respect of the loans secured through 'Certificates of Stock' — which has not happened yet in 10 years! — the law prescribes that, in such a case, the wine be sold by the Institute and the proceeds of the sale applied to the liquidation of those engagements. In the event of the wine finding no buyer, it will be distributed pro-rata by all shippers at the price specified by the Institute at the time when the 'Certificates' were issued.

This credit scheme has afforded the Port Wine trade the necessary financial means with which to weather the longstanding depression caused by the war and the postwar period, which still has not come to an end.

The loans thus granted to the Trade reached the substantial figure of 170,000 contos (£ 1,700,000 at present rate of exchange).

It should be pointed out that, throughout such a long period, the amount of wine pledged

by the loans in question, has risen from 15.32% in 1939 to 33.15% in 1948 out of the total stocks stored in Gaia; hence, the inference that there still remains a very wide margin for fresh loans.

At the same time, the rate of discount, which had primarily been fixed at 4.5 % was gradually reduced to 2.5% per annum.

The success derived from this credit system would, by itself, amply justify the Corporative Organization of the Port Wine Trade.

Notwithstanding, Port is not produced and matured to be utilized as a pledge to credit operations. Our aim is to ship it abroad, to the same extent, at least as in the prewar period, thus reducing the amount of the loans granted and the obligations thereby implied.

What trade in general urgently needs is freedom of action. In the particular case of the Port wine business, only an economic policy tending to promote and to facilitate the exchange of products among the nations of the world can bear fruitful results.

Port does not fear commercial competition; it only dreads restrictive measures which severely hamper its expansion over the civilized world.

And it should be borne in mind that the economic and financial balance of metropolitan Portugal depends, in a very large measure, on the exports of Port Wine.

What is the use of ascertaining the wheat requirements of Portugal if we do not dispose of the necessary means with which to pay for the cereal? We must sell wine in order to acquire the money indispensable to buy bread.

Port Wine is the golden currency of Portugal!

THE IMPORTANCE OF GRASS

by **W. D. Hay**

Grassland Development Officer of Britain's Ministry of Agriculture
in charge of the official experimental husbandry farm at Win-
chester, England

The history of the grass crop in the United Kingdom is a very interesting one. In the north of Britain ley farming has been practised for generations, whereas in the south permanent pasture with definite areas set aside for tillage crops was the rule. The tenant farmer was not altogether responsible for this state of affairs. In the south he could not plough up a permanent pasture, unless specific permission from the landlord was granted, without incurring a penalty. In the north, however, a similar penalty was exacted if a pasture was left down for more than a stated number of years, commonly three or four.

These systems, especially that in the south, dictated a rather rigid type of farming with little scope for the progressive and ambitious farmer.

All this was altered during the second World War when it was recognized that to get increased production many old moribund permanent pastures had to be ploughed up to provide the necessary extra food required. Between the two world wars there was available for farmers an unlimited supply of concentrated feeding stuffs at a very low price, consequently grassland was not looked upon by the majority of farmers as a potentially important source of foods for livestock.

Nevertheless, even then a few farmers in permanent pasture areas used the temporary ley as the centre of their farming policy and fully realized its potentialities. During the war, especially in its early stages, the emphasis was on tillage crops — wheat was the most important closely followed by potatoes — and milk, with the resultant unbalanced 'systems' of farming. This was a policy, which despite the high peak of production reached in 1943, could not be sustained because it was in contradiction to the rules of good husbandry, and its dependence on external pools of casual labour, machinery, and contract work.

SOUND HUSBANDRY

After the war the emphasis was on sound husbandry, and so it is today. This means balanced farming, giving livestock the prominence they deserve, together with the necessary amount of tillage crops. Owing to the post-war difficulties with which Britain was faced an expansion programme in agriculture was announced in the autumn of 1947. Farmers were asked to increase their production by some 50 per cent. over the pre-war (1939) figures. An improvement in livestock — greater dependence on home-grown feeding stuffs, increased acreage of foods for human consumption, wheat, potatoes, sugar beet etc. were the principle points in the programme.

Obviously if Britain's livestock were to be increased they had to be fed and that on a much reduced amount of imported feeding stuffs. Approximately $8\frac{3}{4}$ million tons were imported in 1939 as compared with $2\frac{1}{2}$ million tons in 1948.

Where then were the feeding stuffs to come from? It has been recognized for many years that grass, if properly treated, is able in itself to carry a very much larger head of stock than even the most optimistic had previously imagined. Here then was the answer on Britain's own doorstep; properly treated grass, an extended grazing season, better conservation of the summer flush for winter feed, together with such crops as linseed, lucerne, kale and various forage crops.

An apt slogan has been used in this expansion programme — 'Fertilize the best and plough up the worst'. This means that some of the best permanent pastures in the United Kingdom will fit into the farming programme, but that if this is to succeed a great extension of ley farming must take place.

What are the advantages of ley farming?

(1) It gives a flexibility to farming that no other system can emulate.

(2) Produces an enormous amount of high class clean and nutritious food.

(3) Restores fertility.

(4) Gives over-cropped land a welcome rest.

LEY FARMING

The terms used for this system are many, ley farming, alternate husbandry, the three year ley system (meaning that the ley should remain down for at least three years.) are a few of the terms, and, as a Scottish farmer called it 'Just farming'! It is recognized now that the ley is a crop just as are wheat or kale, and to grow the maximum crop the rules are similar. If a farmer wishes to grow a good crop of wheat he must observe certain rules which are :

(1) Thorough and sound cultivations.

(2) Adequate manuring.

(3) Good seed.

(4) First class after-management.

Exactly the same rules apply to the ley ; neglect any one and the result cannot be maximum production.

How does ley fit into the farming system ? The place of the ley in the rotation is well known in many parts of the British Isles, especially on poorer lands and hill farms. It is not, however, accepted on many farms and the question ' does it pay ? ' often arises.

Wylie, an agricultural economist at Wye College in Kent, finds difficulty in apportioning the degree of profitability that rotation grasses play in the economy of the farm. — he goes on to say, however :

' It has been emphasized several times in these reports that rotation pastures on the College farms have come to be regarded as the foundation of the whole farm economy and this conclusion is not based upon the financial results from any one section but from the farm as a whole. It has been shown that substantial profits have been made on the arable land crops, the dairy stock and the breeding flocks, and there is nothing illogical in saying that these profits are founded on the rotation grass despite the fact that the direct profits on that section of the farms

cannot be computed. Success in farming is still, and always will be, partly a matter of sound judgment in planning a system that will yield satisfactory total profits, and it is in forming that judgment that analytical accounts can be helpful ; but no accounts, however detailed and however accurate, can take the place of sound judgment '.

ROTATION LEY

There can be no rotation that will be suitable for all types of farmers and farm, but a modified system of that practised in many parts of England, Wales and Scotland for many years should suit most cases. The system, with variations, is :

Year 1 Cereals undersown (or direct seeding), years 2, 3 and 4 Ley, .

Year 5 Cereals and year 6 Roots.

In some cases the ley might be cut down to two years, or one, or extended to eight or more years, the latter in more intractable districts. Plough up a small acreage each year, grow kale and silage crops, clean, direct seed and down again to a long period in grass. Again in the mixed arable — livestock — potato growing districts the root break might be potatoes — with an extra 'shift' in cereals, another in silage and down to grass for three to five years.

The length of ley is important and it is difficult to say how long it should stay down ; it is generally accepted that under ordinary conditions productivity tends to fall from the fourth year onwards.

In travelling through Britain during the last year I have been greatly impressed with the progress made in improved grassland farming. Many farmers are applying the knowledge gained during the last decade and are producing increased quantities of meat and milk together with the very necessary tillage crops.

It is not unusual to find farmers aiming at a cow per acre with only the minimum help in imported feeding stuffs. Some have more than doubled production per acre and if progress is maintained there seems to be no reason why the British farmer should not only obtain a 50 per cent. increase in production but exceed it.

ITEMS OF INFORMATION

NUTRITION



The United Kingdom policy for the 'Vulnerable groups' - young children and expectant and nursing mothers.

(Communication from the Ministry of Food - Welfare Foods Service - British National FAO Committee)

The Industrial Revolution in Britain created such wealth and so much to wonder at that it was only at the beginning of this century that its effect on the nation's health became a matter for alarm. Even then it was more the insanitary and demoralizing conditions of the crowded cities than the poor quality of the nation's diet which agitated the authorities or even the medical profession. Yet bread and margarine were the staple foods of many children - in a survey carried out amongst poor children in a London borough in 1892 it was ascertained that 83% had no other solid food than bread for 17 out of the 21 meals in the week. The bread was the devitalized product of the new milling processes of the 19th century and the margarine which was spread on it was completely devoid of the fat soluble vitamins A and D with which it is now fortified and which make it nutritionally similar to summer butter.

In the first forty years of this century efforts were made to remedy this. In 1906 an Act was passed which gave local Education Authorities the power, but did not oblige them, to provide meals

to school children free or at reduced charge. By 1934 the meal supplied contained 5-600 calories and 8-10 g. of protein. In the same year, as a result of the combined pressure of increased poverty due to unemployment and of the need to expand the domestic market for agricultural products, the Milk in Schools Scheme was started, providing $\frac{1}{3}$ pint for $\frac{1}{2}$ d. in all state-aided schools. By 1939 in fact a good start had been made toward rectifying malnutrition among children. When the shortages of the war years began further to threaten the health not only of school-children but of the major 'vulnerable groups' namely expectant mothers, and the infants in under school-age, it was realised that a much more comprehensive scheme of protection in the field of nutrition was required. Accordingly the National Milk Scheme was instituted in 1940; to be followed in 1941 by a scheme for the provision of vitamin concentrates to the vulnerable groups and by an improvement in the standard of school meals to provide at least $\frac{1}{3}$ of the daily food requirements of school children. In 1946 milk in schools became free of charge. Finally in the same year the National Milk and Vitamin Schemes became, under a new name, the 'Welfare Foods Service' a permanent feature of the nation's social services.

The welfare foods service

The Welfare Foods Service covers principally the classes of expectant mothers and children up to five years of age. It does not undertake to supply the total food requirements of these groups but aims to secure the extra margin of desirable nutrients which is either very expensive or difficult to obtain or to assimilate from usual foodstuffs.

The expectant mother, for example, could meet her extra requirements of calcium by eating large quantities of fortified bread but that would impose a strain on her digestion; she could get it by drinking more milk, but the supply of milk is normally restricted. Alternatively even if the supplies of milk were unrestricted and she were willing to eat more bread, she would still have to make a larger money outlay to supply her needs than she would if she were not having a baby. In order that she should not be dependent only on the normal sup-

plies of milk or on the state of the family budget, priority milk is provided at a lower cost than to the ordinary consumer and, in really necessitous cases, free.

For similar reasons free Cod Liver Oil (for the vitamins A and D) and low-cost Orange Juice (for vitamin C) are provided by the Service, because vegetables sufficient to meet her requirement of vitamin A and C would make a bulky diet for the expectant mother and vitamin D is not easily obtainable from other sources than oily fish and the action of sunlight, which is not eminently reliable. Again the importance of saving the expectant mother further expense has been a major purpose in providing the concentrates.

These considerations, of course, apply with even more force to the young child whose capacity for consuming the quantity of ordinary foodstuffs which would be necessary to supply it with its requirements of vitamins and calcium is limited. In addition, it has been recognized that, as a young child is already a financial burden on the family by way of the outlay necessary to provide cots, prams and clothing which is quickly outgrown, the parents should be spared the expense and worry of obtaining for it the nourishing elements it needs.

In the main, the needs of the expectant mother are determined by the needs of the child she is carrying. There is, therefore, a great deal of similarity between the foods provided by the Welfare Foods Service for the expectant mother and for the child under five. They both receive a pint of milk a day at reduced price (1½d. instead of 5d.), a bottle of Cod Liver Oil (6 fluid oz.) every six weeks, free, and orange juice at 5d. a bottle, though the expectant mother gets nearly twice as much - a bottle of 6 fluid oz. every nine days instead of every two weeks to contribute to her very high vitamin C requirement. Young babies may have a 20 oz. tin of National Dried Milk a week in place of liquid milk. This is equivalent in food value to the priority liquid milk for which it may be substituted except that it is fortified with vitamin D so as to provide 800 to 1,600 I. U. daily. In addition, the mother may take Vitamin A and D tablets in place of the Cod Liver Oil which is often unpalatable to adults. These tablets continue until 30 weeks after her confinement.

The expectant mother is provided in this way with a high proportion of her requirements - a fifth of the protein she needs, over a third of the vitamin C and riboflavin, nearly half of her requirements of calcium and most of her requirements of vitamin A.

After the baby is born welfare foods provide the whole of the unweaned baby's requirements of the six nutrients mentioned above. As the child grows older a gradually decreasing proportion is supplied, until, by the age of four or five years, while the

requirements of vitamins A and D are still met with some margin of safety, two thirds of the requirements of calcium and riboflavin are supplied, just under half of the vitamin C and just over a third of the protein requirements.

After the baby is weaned it is, of course, unnecessary for it to derive a high proportion of all nutrients from special foods: it is able to obtain vitamin C from vegetables, and bread begins to supply the child with some of its protein. Thus from the age of one year to five the allowance of welfare foods remains constant, as the child can be expected to provide for its increasing requirements from the increasing range and quantities of foods to which it is introduced. In the meantime, however, mothers and growing infants have benefited during nearly 6 years from priorities and from allowances in kind which represent a cash value to each beneficiary of almost 3s. weekly.

Other allowances

In addition, the expectant mother is allowed an extra half ration of meat a week and an extra egg per allocation, to provide additional animal protein. Children are allowed normal adult rations except that they get a half of the adult meat ration and no tea, and that from 6 months to two years they are allowed priority shell eggs at the rate of three per week.

From the age of five the child is allowed the same rations as the adult members of the community and retains a priority claim to milk of 3½ pints per week. It benefits further from the third of a pint of milk daily and the midday meal provided at school.

The health of the vulnerable groups

Many factors influence the health of a community, and it is difficult to assess the contribution of any one with scientific precision. There are however, certain phenomena in public health which are known to be at any rate significantly affected by nutritional factors, and from which it can be judged whether or not the welfare Foods Service has had a positive effect on the health of the vulnerable groups.

Among these are the mortality rates attending pregnancy and infancy. Between 1932 and 1940 the death rates in England and Wales due to pregnancy, childbearing and abortions decreased from 4.19 to 2.62. Between 1940 (when the National Milk Scheme was first introduced) and 1948 the rate decreased by a further 1.51 per 1000, i.e. from 2.62 to 1.11. In Scotland, between these two latter years, the decrease has been rather greater from between 4.8 and 3.63 to 1.5 per 1000.

The still birth rate in England and Wales decreased between 1932 and 1940 from 41 to 37

per 1,000 births. Between 1940 (when the National Milk Scheme was first introduced) and 1948 the rate decreased by a further 14 per 1,000 *i.e.* from 37 to 23. In Scotland, between these two latter years, the decrease was almost as great, *i.e.* from 42 to 29 per 1,000.

The infant mortality rate for the United Kingdom fell from 68 to 60 per 1,000 live births between 1932 and 1940. From 1940 to 1948 the decrease was 25 per 1,000 (from 60 to 35).

This accelerated decrease in the still birth and infant mortality rates in the years 1940 to 1948 was three times the rate at which improvement was being effected in the eight years up to 1940. This progress was made at a time, during war, when any number of material and social factors would ordinarily be expected to militate against improvements in the state of public health, particularly in respect of the vital occasions to which these figures refer. Nevertheless the improvement has been made, and in such a degree that the influence of the Welfare Foods Service cannot be ruled out.

Another index which is known to be affected by diet is that of the health of the teeth of children. The conclusions of Lady May and Helen Mellanby in respect of their inquiries into the reduction of dental caries in 5 year old school children in London, over the years 1939-1947 (B.M.J. 28th August 1948) are an important indication of the social value of the Welfare Food Service. They may be summarized as follows:

'The progressive improvement found in the two previous surveys (in 1943 and 1945) has also been observed in 1947. The rate of increase in the percentage of caries-free or almost caries-free children between 1945 and 1947 has been more rapid than between 1943 and 1945, and certainly much more rapid than between 1929 and 1943. The same trend has occurred between 1943 and 1947 in the structure of the individual teeth and the incidence and extent of caries, the improvement being greater in the second two years than in the first two.

'As in the 1943 and 1945 surveys, it is again suggested that the improvement is due to the increased calcifying properties of the dietary of this country, and particularly that of pregnant and nursing women, infants and young children. The marked improvement in 1947 is thought to be mainly due to the fact that for the first time in these surveys the diet has been of consistently better calcifying qualities over the whole ante-natal and post-natal life of the children concerned'.

Finally, reference may be made to the comments on the health of British children made by Dr Henry Bonnet after his visit in June 1948 with a group of specialists from twelve countries. Dr Bon-

net considered that the physical condition of the children he saw was excellent and, in his opinion, due to feeding. He said that the system of milk in schools, school feeding and welfare has produced obvious results, and that he noted a great difference between the children who had been brought up during the war and those whom he had observed before 1939.

General observations

Improvement in nutrition is a cardinal aim of FAO. The foregoing is a description of one way in which the United Kingdom is giving loyal effect to the pledges of its membership of the Organization. Naturally it cannot be done without cost, which is to be regarded however as an investment on two counts at least. First of all, it is an investment to secure the health of the people in the generations to come and to ensure healthy births, healthy growth, and full enjoyment of activity in work and play. Secondly it is an investment if not directly *in* then certainly *for* agriculture, since by far and away the bulk of expenditure on the Welfare Food Scheme (coupled with the School Meals Service which has not been described in this article) goes in the purchase of the products of farms and fisheries: — in milk, meat, vegetables, fish and particularly their vitamin extracts, orange juice — all helping to maintain an outlet and consistency of demand for foodstuffs which cannot but encourage producers to keep their aim high. It is the faith of the U.K. that its Welfare Foods Service is one of the ways in which in course of time the true marriage of food and agriculture will come to be effected.

International allocations of rice to end on 31 December 1949

International allocations of rice will be discontinued on 31 December 1949.

Decision to de-allocate the one remaining agricultural product under international allocation was recommended by FAO's Committee on Rice — a committee of 18 government representatives.

The Committee reviewed the factors likely to affect international trade in rice in 1950, and concluded that it would not be feasible to develop allocation recommendations based on relative needs — the basic principle which has guided the determination of allocation recommendations.

Activities of the Committee on Rice, and of its Sub-Committee located in Singapore, will continue through the rest of 1949.



Contribution to the drafting of an international statute to protect the rights of discoverers of agricultural and horticultural products

by LOUIS LION *Dr Sc. (Comm.), U. Lg. and Raymond JAUNE, Ingénieur agronome, A. I. Gembloux Belgium.*

I. PRELIMINARY REMARKS

In this survey we have largely drawn on the basic principles of the Belgian industrial legislation and we deemed it expedient to consider the problem from its two dominant aspects, namely, juridical and technical.

One point should be mentioned. The term 'horticultural proprietary' so currently employed that it is already recognized, does not seem very apt and, juridically speaking, gives rise to confusion.

II. GENERAL LEGAL PRINCIPLES

'Rights of discoverers of agricultural and horticultural products' seems preferable to us, as we thus give the idea of an intellectual right and not a real right as the term 'proprietary' implies.

In effect, everyone is aware that, in addition to real rights (ownership and usufruct of proprietary rights) and personal rights, there is a third group of pecuniary rights: the intellectual rights.

These rights do not apply to a material object but to the intellectual effort which is the basis of the invention which can be reproduced, the improvement which can be made to infinity in the material object.

Intellectual rights applied to industry (and to trade) protect not only the intellectual effort but also remunerate the moral value, the reputation acquired by an industrial firm or business house, and guard them against unfair competition.

Intellectual effort is protected by patents for inventions, copyright for designs and plans in industry, and secret manufacturing processes.

The moral value is remunerated by trade marks.

For an object to be validly patented *, it must be:

(a) an invention or a discovery, (these two terms are equivalent before the law),

(b) a licit invention, that is to say, not prohibited by law,

(c) a product of human activity,

(d) an invention which can be exploited in industry or trade, namely, which can be bought or sold,

(e) a new invention — in the literal sense of the word (the object must be different from all other existing ones).

It was through the assimilation of 'obtainments, inventions and discoveries' achieved in the field of agriculture and horticulture, with those secured in the industrial realm that, as far back as 1935 a bill aiming at the protection of horticultural proprietary rights was brought in before the Belgian Parliament, and then again presented on 16 July 1936. The bill was not put to the vote as more pressing problems required attention.

On the other hand, some countries which were also interested in this question, did not hesitate to assimilate unreservedly horticultural discoveries with industrial inventions protected by patent. This is particularly the case for the United States (Belgium, Parliamentary Document No. 76, Extraordinary Session 1936, Sitting 16-7-1936).

On 12 December 1946 Austria promulgated Federal Act No. 24 relative to the protection of plant production in Austria. The following particulars have been taken from the Food and Agriculture International Law Journal, English edition, 1947, No. 1, January-June, p. 64:

'For the purpose of protecting the production of plants the Act provides for opening at the Ministry of Agriculture and Forestry a register of cultivated plants. This expression refers to agricultural and horticultural plants, medicinal plants and flowers, but not to trees, shrubs and vines. Varieties of plants which are a novelty or an improvement and which are not yet on the market may be registered, as well as varieties already on the market but of such importance that their preservation for production purposes is of special interest.

'The Ministry will appoint a Committee for the Register of Cultivated Plants which will decide on the registration of plant varieties. The operator of a business for the cultivation of plants will apply to the Committee for registration and will send, for purposes of scientific research and tests, seed of the variety registered to the Federal Institute for seed production and testing at Vienna. The plants accepted for registration are classified as "Hochzucht" (selected variety) and "Erhaltungszucht" (maintenance variety). The regis-

* The only products not considered patentable according to Belgian law are medicinal compounds and, in general, all curative preparations.

ter is open to the public. The Ministry of Agriculture and Forestry may, under certain conditions, authorize the registration of varieties cultivated abroad.

'Varieties registered prior to 1938 will be registered again at the request of the cultivator. Likewise, the varieties grown in Austria and registered in the list of the Reich Agricultural Corporation, may now be registered in the register of cultivated plants'.

III. TECHNICAL ASPECTS

In view of the more and more intense flow of commercial exchange which is now taking place across the frontiers, of the multiple efforts being made everywhere to produce new varieties, to increase the yields of some existing varieties, to improve the resistance of others to disease and climatic factors, and lastly, in view of the increasingly extensive industrialization of horticulture, it seems only logical to grant discoverers in the horticultural field the same advantages and the same pecuniary rights as those so liberally recognized by industrial patents, provided, of course, that the obtainment, discovery or invention meet the requirements for a 'patentable object' as described earlier on. Some international organizations have recognized the need to grant a certificate of recognition to those who produce novelties in different fields.

Thus, it is stated in a report of UNESCO (Doc. 'Education de Base') that this specialized institution would like consideration to be given to the world-wide improvement of proprietary rights. This proves the universality of the question and its extension in all fields of human activity.

An international juridical statute covering agricultural and horticultural discoveries should be established making it incumbent upon the signatory States and within the framework of their legislation, to extend protection of invention rights, such as is the case with patents, to producers of new horticultural products. Coordination on the international level of the legal provisions thus taken within the framework of national laws will have the immediate result of ending the frontier limits of patents.

By its very nature, this problem comes within the province of FAO which has already repeatedly approached it.

i. In 1930, the International Professional Horticultural Federation called the attention of the International Institute of Agriculture to the necessity of promulgating a law in the different countries to protect the producer of new plants.

ii. On occasion of the first Meeting of Experts on Horticulture (The Hague, 16-17 May 1947) the Belgian National FAO Committee sent the meeting a telegram to the effect that it would like the European National Committees and the General Assem-

bly to examine firstly the international legislation regarding the importation of plants and seeds, and certificates of origin, and secondly, the international legal statutes for the protection of the rights of discoverers of new horticultural varieties.

The Committee was of the opinion that the first point did not come within its province, but that the second point was very important and should have the attention of FAO.

iii. At the Third Meeting of the European National Committees (Rome, 16-21 July 1947) the Netherlands Delegation made a proposal practically identical with the recommendation transmitted by the Belgian FAO Committee, aiming at convening a meeting of experts with a view to making a more exhaustive study of the problem of the protection of proprietary rights regarding new agricultural and horticultural varieties. After discussion and with the support of the French delegates, the Belgian and Netherlands recommendations were adopted in the following form:

'The Technical Committee, considering that an international agreement on seed certificates, the rights of the discoverers of new plant varieties, seed testing and seed nomenclature, should be achieved as soon as possible,

recommended that the European Office of FAO convene in the near future a meeting of experts, who, after examination of the existing legislation, would have to suggest in what way and by what means it will be possible to obtain an international agreement on seed certificates, seed testing, seed nomenclature and the rights of discoverers of new plant products'.

iv. At Geneva (Third Annual Conference of FAO, 25 August to 11 September 1947) the adapted text of the preceding recommendation was presented in the following form:

'FAO is recommended to have a Committee of Experts examine the question of the protection of inventions in the agricultural and horticultural field, and particularly that concerning the obtaining of new varieties of agricultural and horticultural plants'.

This motion, debated by Commission II, was opposed by the delegations of some States and seconded by others.

Put to the vote, the motion was lost.

Among the arguments raised against the Belgian recommendation, attention is called to the following points:

1. *It would not be fair to the Agriculture Division to throw on them a whole variety of new tasks.*

Note the contrast between this opinion and that passed on this subject by the Committee of the 1st Meeting of Experts on Horticulture at The Hague.

2. *It should be the policy of member governments that any discovery in agricultural science should be made available to all countries of the world through*

the medium of FAO, and that no restriction should be placed on the dissemination of knowledge of that kind.

It may be asked in what respect the adoption by all the member governments of an international statute assuring the protection of agricultural proprietary rights would be prejudicial to the gain that the States may obtain from inventions and discoveries made in any one of them. As we have already mentioned, the sole purpose of this statute would be to abolish one of the two limiting factors of the patent system, as we understand it, namely, frontier limits.

3. *If too many obstacles were placed in the way of free exchange of material, this would hinder the development of new stocks.*

It is not quite clear how the conclusion of an international agreement on the protection of agricultural discoveries would paralyze the free exchange of scientific results obtained in the different signatory States.

4. *Many of the new developments in agronomy came from experiment stations which were public institutions and had to make their findings available to the public.*

Experiment stations, with a legal status, like Universities, could have their working possibilities increased by the granting of international subsidies.

5. *The very nature of this reproduction of plants was such as to make it difficult to patent them.*

Why? If the practical result achieved is not due to chance (and in that case, it would not and could not be patented), we do not see why the experiment conditions which led to this result — and in so far as these experiment conditions can be reproduced in practice and permit a large scale exploitation of the result — cannot be protected by patent.

The findings reported by the experiment stations, mentioned above, are authentic. In addition, the Belgian legislator does not consider the amount of research work involved. As soon as there is a novelty there is an object to be patented. When the conditions governing the discovery are duly described and recorded, why should the patent not be granted?

IV. CONCLUSIONS

Examination of the various objections does not show any imperative reason opposed to extending to the agricultural field the principles now in force in industrial legislation.

We express the wish that experts may again turn their attention to this problem with the earnest desire to find a solution which will enable intellectual effort applied in the field of agriculture to be recompensed.

Land rehabilitation in Ireland

We read in the *Progress and Programme Report to FAO, 1949, submitted by Ireland*, that: 'the work of draining, reclaiming, liming and fertilizing Irish farmland has now been undertaken on a large scale through the medium of a Land Rehabilitation Project, under which farmers are being given the choice of carrying out such work themselves in consideration of grants towards the cost, or of having the work carried out for them by the Department of Agriculture on the basis of a cash payment by each farmer in respect of the land improved or the addition to his land purchase annuity of the equivalent of such cash payment spread over the term of the annuity. Assistance will also be given to drainage contractors towards acquiring field drainage machinery by means of grants and credit facilities. The Project has been put into operation initially in eight of the twenty-six counties and will be extended as speedily as possible — within it is hoped twelve months — to all the counties. It is estimated that some 4 million acres of farmland, widely distributed throughout the country, are either unproductive or seriously under-productive because of inadequate drainage and low fertility; and that about 2½ million acres of that total require intensive drainage and about 1½ million acres partial drainage.

The classes of work to which the Land Rehabilitation Project applies are: Field Drainage; Land Reclamation; Reconstruction and Improvement of Watercourses; Removal of Unnecessary Fences which involve Waste or impede Cultivation; Construction of New Fences and Improvement of Existing ones; Improvement of Hill Grazing; Reclamation of Estuarine Marshland and Callows.

Where the work is carried out by the farmer himself the grant amounts to two-thirds of the approved estimated cost subject to a maximum grant of £ 20 per statute acre. Part of the grant payable takes the form of 2 tons of ground limestone or its equivalent and 6 cwt of ground mineral phosphate or its equivalent. Where the work is carried out by the Department of Agriculture, the cash payment to be made by the farmer is two-fifths of the cost of the work subject to a maximum of £ 12 per statute acre.

The agricultural position in Switzerland

(Abstract from *Annual Report, Berne, June 1949*)

The third Swiss Annual Report presented to FAO sets forth, *inter alia*, the economic conditions peculiar to agriculture in Switzerland:

'The distribution of the national income for the year 1948 indicates how critical the situation still is. The income of farmers and their employees —

who with their families form slightly under 20 per cent. of the total population — does not even represent 10 per cent. of the total national income. During the war, period when conditions, for agriculture, were better than today, its share of income was very little more than the present figure, so that even now agriculture cannot be considered as being on a par with other occupations. The present level is more or less that which was already deemed inadequate, even dangerous for the existence of the peasantry in the years which followed 1930. This shows that in Switzerland, a highly industrialized country, to which an intensive exchange of merchandise with abroad is essential, the situation and output of agriculture have scarcely improved even during hostilities. Problems which were thought to have been solved recently have again cropped up, compelling the Government to take protective measures to assure the existence of the farmer.

'As a result of the progressive improvement in food supplying and the increase in milk production, it has been possible to raise slightly the export of agricultural produce. The export of cheese is a traditional trade.

'It is hoped to be able to increase these exports which have not yet attained their pre-1939 volume.

Breeding stock of the Schwyz brown and Simmental red spotted breeds also form an important export commodity. The possibilities of selling abroad were relatively good during the years immediately after the war, but the situation is less favourable now. Difficulties arise not only when trade agreements are concluded but also in regard to prices. The unusual drought of 1947 caused a considerable decrease in the herds; the result was a heavy demand for young stock to replace losses, so that prices on the home market have remained at a relatively high level. Foreign buyers consequently, have made numerous purchases in other countries where prices were lower. Export difficulties will continue to augment if prices are maintained to cover the expenses of the stockbreeders, most of whom operate in the mountains of the fore-Alps and the Alps, not a greatly favoured region from the climatic and topographical standpoint.

'An abundant crop and a methodical scouting of the markets enabled Switzerland to deliver appreciable quantities of fruit abroad'.

Referring, at the end of the first part of the Report, to the recommendation of FAO formulated at the conclusion of Annual Conference of 1948, Switzerland notes :

'Europe is urged, for instance, to increase agricultural production in every respect, as the food supplies of this continent are still inadequate. Unfortunately this is not possible in every sector of Swiss agriculture. In some cases Switzerland is obliged to reduce war-time production levels, either because consumption has decreased or for want of export

possibilities. The application of measures concerning agricultural production depends, therefore, on the demand on the home and foreign markets. FAO asks each country to produce the maximum sustenance. This goal will certainly be reached in Switzerland, even if the methods employed differ from those of other countries'.

New agricultural research institutes

(Press Notice of the British Ministry of Agriculture).

Three agricultural research institutes have been established in England as from October 1st : National Institute of Agricultural Engineering at Silsoe 'Bedfordshire; Grassland Research Institute at Drayton, Stratford-on-Avon; and Vegetable Research Station at Wellesbourne, Warwickshire.

These three institutes will be financed by grant-aid from the Ministry of Agriculture and the Department of Agriculture for Scotland and will come under the scientific oversight of the Agricultural Research Council. They will thus join the 'family' of agricultural research institutes comprising such well-known centres as Rothamsted Experimental Station, the East Malling Research Station and the National Institute for Research in Dairying.

The sovkhosy

On occasion of the twentieth anniversary of the 'Gigant' sovkhos, several Soviet publications gave interesting information on the organization of one of the most important of these government farms.

The Gigant sovkhos specializes in cereal cultivation. In 1940, 37,600 hectares were grown to cereals; during the war this area decreased, but it is expected that in 1950 it will attain 36,000 ha. 76 per cent. of the output of this sovkhos is obtained from crops (10.4 million roubles) and 24 per cent. from livestock (3.2 million roubles). The sovkhos possesses 72 tractors totalling 2,952 h.p.

The sovkhos has a director who supervises

(1) The secretariat; (2) the workers; (3) the deputy-manager who is in charge of the petrol supplies, motor vehicles, equipment and stores, roads and buildings, telephone and wireless service, housing, canteens, stabling, repairs; (4) the farm accountancy department divided into four sectors conducted by an accountant; (5) the agricultural sector directed by an agricultural expert in charge of a technician for seed selection and a forester. A meteorological station is attached to this sector; (6) the zootechnic sector conducted by an expert, a head veterinarian and a stockbreeding technician; (7) the mechanization sector directed by a chief engineer with an assistant engineer. This sector includes the repair-shops, garages and equipment stores, and the technical assistance service.

Subordinate to these sectors the work of the

sovkhoz is divided into twelve other sectors supervised by a manager, an agricultural expert, a mechanic, and for half of these sectors, an animal husbandry expert. They work in close contact with each other.

In 1947 the personnel of this sovkhoz amounted to:

716 full-time workers
615 seasonal workers
66 engineers and technicians
69 staff
14 trainees

Total 1,480

At the beginning of 1948, the specialists numbered 63 and consisted of 12 agricultural experts, 20 mechanical engineers, 19 animal husbandry experts, 11 section managers. It is to be noted that the specialists include also the persons who have become specialists by practical experience as, according to the book of F. A. Boyko *, from which this information has been taken, the 63 specialists of this sovkhoz are graded according to the instruction received: Higher instruction, completed or uncompleted 11; medium instruction 19; lower instruction 33.

In 1947, an average full-time worker earned 5,366 roubles.



Breed composition of European livestock

The following tables give the results of a survey of the breed composition of European livestock, carried out on the recommendation of the First Meeting of Experts on Animal Production in Europe, which was convened in Rome 23-25 April 1947 by the European Regional Office of FAO.

To this end a questionnaire was sent to all the European National FAO Committees and replies were received from the following countries: Austria, Belgium, France, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Switzerland and the United Kingdom.

The results of the replies received are set out in the said tables and give information about the breed composition of the livestock before and after the war; and the number of animals registered in the stud, flock and herd books during the same period.

* F. A. BOYKO. *Pervyi zernosovkhoz*. Moscow, 1949.

LIVESTOCK AND POULTRY BREEDS AND NUMBER OF ANIMALS LISTED IN THE PEDIGREE REGISTERS

The data given in the tables were supplied by the National Committees. They are frequently based on estimates and consequently, in some cases, the totals are also approximate.

... No data supplied.
— According to the information received no data are available.

HORSES

AUSTRIA

Breeds	1939	1946
Light horses (Warmblut)	25,363	32,923
<i>registered: male</i>	88	91
<i>female</i>	1,045	1,119
Hafiling (Avilognese)	11,529	13,718
<i>registered: male</i>	62	71
<i>female</i>	810	1,615
Draught horses (Kaltblut)	184,465	216,744
<i>registered: male</i>	493	619
<i>female</i>	7,622	13,815
Crossbreeds	9,224	10,974
TOTAL	230,581	274,359
<i>registered: male</i>	643	781
<i>female</i>	9,477	16,649

BELGIUM *

Breeds	1929	1946
Belgian draught	294,000	280,946
<i>registered: male</i>	12,000	13,000
<i>female</i> . . . . .	...	82,000
Thoroughbred	1,000	1,000
Half-blood trotter	3,000	2,500
Crossbreeds	22,000	20,000
TOTAL	320,336	304,446
<i>registered: male</i>	12,000	13,000
<i>female</i> . . . . .	...	82,000

* The number of horses belonging to each breed is calculated from estimates, as the census was not taken of each breed.

HUNGARY

Breeds	1935	1946
Light horses (Warmblut)	703,445	667,396
Arab	493	—
Arab half-blood	18,931	—
Thoroughbred	2,367	—
English half-blood	39,572	—
Nonius	110,804	—
Lipitsa	14,816	—
Other	516,462	—
Draught horses (Kaltbut)	182,450	175,688
TOTAL	885,895	843,084

IRELAND *

Breeds	1939	1946
Thoroughbred	6,000	6,000
<i>registered: male</i>	300	300
<i>female</i>	5,700	5,700
Irish draught	4,000	4,000
<i>registered: male</i>	250	250
<i>female</i>	3,750	3,750
Clydesdale	600	600
<i>registered: male</i>	60	60
<i>female</i>	540	540
Crossbreeds	434,548	441,754
TOTAL	445,148	452,354
<i>male</i>	610	610
<i>female</i>	9,990	9,990

* Estimates.

HORSES (cont.)

ITALY

Breeds	1939	1946
Oriental	600	500
<i>registered: male</i>	50	—
<i>female</i>	78	—
Thoroughbred	2,500	2,100
<i>registered: male</i>	159	240
<i>female</i>	1,298	895
Anglo-Oriental	400	300
<i>registered: male</i>	26	—
<i>female</i>	103	—
Improved Maremma	15,000	10,000
<i>registered: male</i>	280	140
<i>female</i>	699	263
Salerno improved	28,500	26,000
<i>registered: male</i>	198	114
<i>female</i>	506	217
Calabrian improved	9,000	8,000
<i>registered: male</i>	208	146
<i>female</i>	478	240
Apulian from Capitanata	15,000	12,000
<i>registered: male</i>	136	96
<i>female</i>	438	346
Murge	12,000	10,000
<i>registered: male</i>	51	29
<i>female</i>	116	104
Improved Sicilian	60,000	54,000
<i>registered: male</i>	200	100
<i>female</i>	1,000	574
Improved Sardinian	40,000	35,000
<i>registered: male</i>	24	19
<i>female</i>	755	435
Lipitsa	1,500	1,000
<i>registered: male</i>	70	80
<i>female</i>	227	496
Trotter	5,000	8,000
<i>registered: male</i>	1,224	3,104
<i>female</i>	1,750	4,518
Crossbred trotter	13,000	13,000
Hafing (Avilognese)	6,000	5,200
<i>registered: male</i>	60	25
<i>female</i>	232	514
Morie	3,000	2,500
<i>registered: male</i>	20	—
<i>female</i>	191	200
Italian heavy draught	95,000	80,000
<i>registered: male</i>	—	331
<i>female</i>	—	1,640
Italian rapid light draught	110,000	95,000
<i>registered: male</i>	303	* 51
<i>female</i>	1,308	* 550
Crossbreeds and different local types	100,000	85,000
Mixed herds	264,500	132,400
TOTAL	781,000	580,000
<i>registered: male</i>	3,009	4,475
<i>female</i>	9,179	10,992

* Incomplete data since the numbers of pedigree animals are being revised.

LUXEMBOURG

Breeds	1939	1946
Belgian draught	18,017	15,957
<i>registered: male</i>	38	59
<i>female</i>	800	1,250
TOTAL	18,017	15,957
<i>registered: male</i>	38	59
<i>female</i>	800	1,250

NETHERLANDS

Breeds	1939	1946
Dutch harness	1 96,616	1 142,073
<i>registered:</i>	—	8,015
Frisian	1 . . .	1 . . .
<i>registered:</i>	—	2 416
Dutch heavy draught	222,285	209,559
<i>registered:</i>	—	2 6,113
Crossbreeds	3,221	3,552
TOTAL	322,152	355,184
<i>registered:</i>	—	2 14,544

1 Dutch harness horses and Frisian together.

2 Only the numbers of foals registered in stud books in the year 1945 are available.

HORSES (cont.)

NORWAY

The composition is estimated as follows: 1941 Eastland horses 59%, Westland horses 33.9%, Crossbreeds and unknown breeds 7.1%. In 1946 there were Eastland horses 57.6% Westland horses 33.2%, crossbreeds and unknown breeds 9.2%. The total number of horses in 1939 amounted to 203,931 and in 1946, to 237,974.

POLAND

Breeds	1938	1946
Arab	930	150
<i>registered: stallions</i>	186	46
<i>brood mares</i>	203	76
Thoroughbred	3,200	400
<i>registered: stallions</i>	558	70
<i>brood mares</i>	913	232
Crossbreeds and unknown breeds . .	3,144,380	1,728,950
TOTAL	3,148,510	1,729,500
<i>registered: stallions</i>	744	116
<i>brood mares</i>	1,206	308

SWITZERLAND *

Breeds	1936	1946
Thoroughbred, <i>registered: male</i>	2	6
<i>female</i>	—	—
Anglo-Norman, <i>registered: male</i>	1 21	1 36
<i>female</i>	1 197	1 669
Jura Light draught type, <i>registered: male</i>	211	2x7
<i>female</i>	6,029	10,149
TOTAL, <i>registered: male</i>	234	349
<i>female</i>	6,226	qx, 858

* There has been no census according to breeds. Precise information therefore not available.

1 Including Thoroughbreds.

UNITED KINGDOM *

Breeds	1939	1946
Thoroughbred	50,000	40,000
Percheron	90,000	60,000
Shire	400,000	300,000
Clydesdale	330,000	250,000
Suffolk	150,000	120,000
Other breeds	64,000	64,000
TOTAL	1,084,000	834,000

* The number of horses registered in studbooks cannot be indicated since entries are made at the time of birth only. In consequence the number of live registrations at any time is not available.

CATTLE

AUSTRIA *

Breeds	1941	1947
Spotted mountain (Flekvich) . . .	838,242	772,101
Pinzgau	445,316	368,402
Murboden	353,634	282,368
Brown mountain	248,853	255,896
Oberinntal	78,585	48,532
Blond (Blondvich)	314,341	266,926
Bergscheckon	39,293	28,678
Tux-Zillertal	2,620	2,206
Crossbreeds	298,624	180,892
TOTAL	2,619,508	2,206,002

* Since the herdbooks were partly lost in Austria during the war and they are at present being re-established, these data are not available for the time being.

CATTLE (cont.)

CATTLE (cont.)

BELGIUM *

Breeds	1939	1946
Frisian	210,000	210,000
registered:	12,500	20,000
Flemish	228,000	228,000
registered:	8,200	29,471
East Flemish	23,396	23,396
registered:	6,700	11,000
Belgian White	833,616	833,616
registered:	53,600	91,600
Campine	156,000	156,000
registered:	5,000	7,834
TOTAL	1,651,576	1,651,576
registered:	85,400	159,900

* The figures given are estimated. There have been no censuses according to breed.

¹ Of which 5 to 6% males.

FRANCE

Breeds	1932	1946
Frisian	560,000	790,000
registered: male	—	7,925
female	—	16,534
Normandy	3,370,000	2,820,000
registered: male	—	1
female	—	1
Charolais	1,570,000	1,330,000
registered: male	—	7,300
female	—	18,500
Maine-Anjou	640,000	500,000
registered: male	—	5,370
female	—	6,852
Limousin	790,000	640,000
registered: male	—	1,950
female	—	12,000
Breton Black Pied	440,000	250,000
registered: male	—	4,602
female	—	—
Armorican	320,000	270,000
registered: male	—	1,897
female	—	—
Aubrac	350,000	360,000
registered: male	—	1
female	—	1
Bleu de Nord	2	2
registered: male	—	870
female	—	2,999
Montbéliard	2	2
registered: male	—	800
female	—	5,000
Flemish (French vat.)	500,000	420,000
registered: male	—	250
female	—	2,350
Salers	630,000	360,000
registered: male	—	110
female	—	900
Blond Pyrenean	280,000	250,000
registered: male	—	105
female	—	817
Garonne	2	2
registered: male	—	229
female	—	2,624
Parthenay	720,000	390,000
registered: male	—	79
female	—	943
Gascony	540,000	380,000
registered: male	—	1
female	—	1
Eastern Spotted	1,030,000	970,000
registered: male	—	90
female	—	500
Brown Alpine (Brown Swiss)	2	2
registered: male	—	1
female	—	1
Other Breeds (16 specific breeds)	1,000,000	870,000
Crossbreeds	2,800,000	4,520,000
TOTAL	15,640,000	15,120,000

* The numbers given for each breed are approximate.

¹ Census not completed.

² No detailed figures available. Included in the category 'Other breeds' below.

GREECE

In 1938, 944,135 cattle belonging to local breeds, 30,000 of improved dairy breeds. In 1946, 543,000 were from local breeds and 18,000 improved dairy breeds.

HUNGARY

Breeds	1939	1946
Simmental	6,213	3,102
registered: male	212	94
female	2,616	2,444
Hungarian Simmental	1,024	110
registered: male	42	17
female	550	39
Hungarian Red Spotted	1,587,875	998,878
registered: male	1,345	632
female	26,519	47,197
Brown mountain	16,955	2,114
registered: male	22	3
female	1,008	27
Hungarian Steppe	229,041	109,753
registered: male	176	24
female	6,363	588
Crossbreeds	200,826	108,878
TOTAL	2,041,934	1,222,835
registered: male	1,797	770
female	37,056	50,295

IRELAND

The cattle stock is composed of the following breeds: Shorthorn, Hereford, Kerry, Aberdeen Angus, Frisian, Jersey, Ayrshire. No figures are available as to the numbers of cattle comprised in the different breeds. The bulk of the cattle are either pure or crossbred Dairy Shorthorns. Only a very small percentage of the total cattle are registered in the herdbook.

ITALY

Breeds	1939	1946
A. Dairy		
Brown Alpine	2,000,000	1,740,000
registered: male	2,550	2,320
female	28,950	25,380
Dutch Brown (Frisian)	200,000	205,000
registered: male	1,150	1,070
female	4,900	4,558
Brown Sardinian	90,000	80,000
registered: male	36	32
female	633	570
Other breeds	110,000	175,000
registered: male	29	24
female	1,229	997
Total dairy breeds	2,400,000	2,200,000
registered: male	3,765	3,446
female	35,712	31,505
B. Dual-purpose (beef and draught)		
Chiana and related	350,000	370,000
registered: male	82	4,337
female	55	2,780
Romagna	500,000	330,000
registered: male	94	51
female	2,926	2,016
Marche	490,000	470,000
registered: male	40	19
female	1,909	1,481
Maremma	180,000	175,000
registered: male	64	30
female	1,452	665
Other breeds	280,000	305,000
registered: male	108	22
female	3,361	718
Total meat and draught breeds	1,800,000	1,650,000
registered: male	388	177
female	13,985	7,660

CATTLE (cont.)

ITALY

Breeds	1939	1946
C. Triple-purpose (milk, beef and draught)		
Piedmont.	520,000	475,000
registered: male	18	11
female	862	442
Red pied Friuli.	120,000	105,000
registered: male	29	8
female	2,872	647
Po Valley white.	175,000	235,000
registered: male	37	23
female	1,321	619
Modica.	80,000	100,000
registered: male	82	*...
female	1,644	*...
Other breeds.	605,000	400,000
registered: male	138	66
female	2,217	3,291
Total Triple-purpose breeds .	1,500,000	1,315,000
registered: male	304	100
female	8,916	4,994
Other breeds and herds	2,110,000	1,735,000
GRAND TOTAL	7,810,000	6,900,000
registered: male	4,457	3,731
female	58,613	44,164

* Registration, suspended during the war, is being carried out.

LUXEMBOURG

Breeds	1939	1946
Frisian . . . . .	...	* 88,145
registered: male	350	180
female	7,895	3,050
Meuse-Rhine-Yssel . . . . .	...	* 20,904
registered: male	77	50
female	690	860
Other breeds. . . . .	...	1,537
TOTAL	107,417	* 110,586
registered: male	427	230
female	8,585	3,910

* Year 1945.

NETHERLANDS

Breeds	1939	1946
Frisian . . . . .	...	...
registered: male	* 1,717	2,533
female	* 12,005	22,674
Meuse-Rhine-Yssel . . . . .	...	...
registered: male	* 385	697
female	* 1,899	5,123
Groningen . . . . .	...	...
registered: male	* 136	265
female	* 476	1,126
TOTAL	2,817,314	2,238,897
registered: male	* 2,238	3,545
female	* 14,380	28,926

* Year 1936.

NORWAY

In this country where in 1939 the total number of cattle amounted to 1,455,016, and in 1946, to 1,266,980, ten breeds are officially recognized.

POLAND

Breeds	1938	1946
Frisian . . . . .	...	...
registered: male	...	834
female	...	18,439
Polish Red . . . . .	...	...
registered: male	...	246
female	...	6,041
Polish white backed . . . . .	...	...
registered: male	...	26
female	...	319
TOTAL	9,923,860	3,910,500
registered: male	1,569	1,106
female	24,946	24,799

CATTLE (cont.)

SWITZERLAND

Breeds	1936	1946
Brown and white Swiss.	665,762	654,459
registered: male	* 2,108	3,040
female	* 109,471	133,690
Simmental (red and white). . . .	814,262	745,372
registered: male	* 2,828	3,575
female	* 95,112	118,655
Fribourg.	30,583	25,617
registered: male	* 176	266
female	* 6,176	5,833
Hérens	32,761	28,875
registered: male	* 130	156
female	* 8,302	5,800
Crossbreeds	25,370	17,892
TOTAL	1,568,738	1,472,215
registered: male	* 5,242	7,037
female	* 219,061	263,978

* Animals registered in the herdbooks in 1940.

UNITED KINGDOM *

Breeds	1939	1946
Shorthorn	5,000,000	4,300,000
British Frisian.	1,400,000	2,000,000
Ayrshire.	1,000,000	1,400,000
Aberdeen Angus	340,000	330,000
Hereford	340,000	300,000
Lincoln Red Shorthorn.	200,000	200,000
Other Breeds	592,000	1,099,000
TOTAL	8,872,000	9,629,000

* The number of cattle registered in herd books cannot be indicated since entries are made at the time of birth only. In consequence, the number of live registrations at any time is not available.

SHEEP

AUSTRIA *

Breeds	1939	1946
Brown-headed mutton (Oxford) . .	9,524	11,960
German Mountain (Carinthian) . .	222,221	279,078
Merino	22,222	27,908
Crossbreeds	63,492	79,737
TOTAL	317,459	398,683

* Since the flock books have been lost during the war and as they are at present being re-established, these data are not available for the time being.

BELGIUM

The sheep stock consists of the following breeds: Texel, Hampshire, Suffolk, Downs, Sambre et Meuse, Campine. Figures on breed composition are not available. The total number of sheep in 1939 amounted to 187,351, and in 1946 to 143,652.

FRANCE

Breeds	1938	1945
Early maturing Merino . . . . .	...	150,000
registered: male	1,295	800
female	2,760	3,260
Ile de France . . . . .	...	1,050,000
registered: male	2,700	3,480
female	14,935	20,415
Blue-headed Maine. . . . .	...	...
registered: male	...	121
female	...	640
Cotentin. . . . .	...	90,000
registered: male	...	150
female	...	1,200
Berry du Cher . . . . .	...	...
registered: male	...	300
female	...	2,000

SHEEP (cont.)

SHEEP (cont.)

FRANCE

Breeds	1938	1946
Southdown		300,000
<i>registered: male</i>		4,600
<i>female</i>		
Texel		430
<i>registered: male</i>	56	1,662
<i>female</i>	725	
Charmoise *		250,000
Lacaune *		350,000
Caux and Boulonais		160,000
Berry de l'Inde		300,000
Avranchin		30,000
Bizet		223,000
Limousin		150,000
Larzac		150,000
Ségala		120,000
Landes		183,000
Basque		50,000
de Manech		140,000
Béarn		110,000
Lourdes		68,000
Aure and Campan		80,000
Castillon and Tarasgon		150,000
Arles Merinos		260,000
Savoumon		80,000
Other breeds and Crossbreeds		2,815,000
TOTAL	1 9,872,000	7,259,000
<i>registered: male</i>		
<i>female</i>		

* As the census of the animals registered in the flock books was in progress, the data were not available.
1 Year 1938.

HUNGARY

Breeds	1939	1946
Mutton Merino	1,200	—
Hungarian (fésus)	1,191,677	283,930
Tsigai	127,240	28,067
East Frisian	80	—
Racka	47,035	10,593
Karakul	600	180
Crossbreeds	222,671	74,150
TOTAL	1,590,503	396,920

IRELAND

It is not possible to supply reliable estimates of the numbers of sheep of each breed. Scotch black-face and the Galway Roscommon breeds, however, comprise at least 60 % of the total sheep population. Other breeds bred in the country include Cheviot, Downs, Border Leicester and Lincoln. Total number of sheep in 1939: 3,047,813 and in 1946: 2,422,928.

ITALY

Breeds	1939	1946
Bergamo and derivatives	400,000	400,000
<i>registered: male</i>	100	50
<i>female</i>	2,000	1,200
Sopravisso and Visso	2,000,000	1,800,000
<i>registered: male</i>	250	150
<i>female</i>	5,000	3,000
Improved Apulian and derivatives	1,500,000	1,400,000
<i>registered: male</i>	150	100
<i>female</i>	3,000	2,000
Improved Sicilian	800,000	600,000
<i>registered: male</i>	75	25
<i>female</i>	1,500	500
Sardinian	1,900,000	1,700,000
<i>registered: male</i>	100	75
<i>female</i>	2,000	1,000
Lecce Altamura	280,000	300,000
<i>registered: male</i>	25	15
<i>female</i>	500	300
TOTAL	9,864,000	7,388,000
<i>registered: male</i>	700	415
<i>female</i>	14,000	8,000

LUXEMBOURG

Sheep-breeding is of no importance in this country. Figures concerning breed composition are not available. There are no flock books in this country. Total number of sheep in 1939: 8,465 and in 1946: 10,447.

NETHERLANDS

Practically the entire sheep population belong to the Texel breed. It is impossible to indicate the total number of sheep registered in the flock book. In 1939, a further 12,139 entries (male and female) were made, and in 1946, 21,281. Total number of sheep in 1939: 689,501 and in 1946: 558,318.

NORWAY

The total number of sheep in 1939 amounted to 1,743,802 and in 1946, to 1,706,801. The breed composition in 1946 was as follows: Cheviot 23 %, Valley Breed 18 %, Rogaland 6 %, Old Norwegian Breed 7 %, other breeds and cross-breeds 46 %.

POLAND

	1938	1946
Early maturing Merino
<i>registered: male</i>	...	248
<i>female</i>	...	2,339
Black-headed mutton (Oxford)
<i>registered: male</i>	...	54
<i>female</i>	...	293
Karakul
<i>registered: male</i>	...	67
<i>female</i>	...	414
Polish long-wool
<i>registered: male</i>	...	98
<i>female</i>	...	1,363
TOTAL	1,941,490	727,100
<i>registered: male</i>	877	467
<i>female</i>	12,323	4,409

SWITZERLAND

Breeds	1941	1946
White Swiss Mountain	107,038	...
<i>registered: male</i>	...	2,095
<i>female</i>	...	16,844
Brown-headed mutton	13,022	...
(Oxford) <i>registered: male</i>	...	610
<i>female</i>	...	2,648
Black-brown Mountain	21,735	...
<i>registered: male</i>	...	123
<i>female</i>	...	1,191
Valais Black-nose	11,148	...
<i>registered: male</i>	...	162
<i>female</i>	...	795
Other breeds and Crossbreeds	24,298	...
Unknown breeds	20,933	...
TOTAL	200,670	...
<i>registered: male</i>	...	2,990
<i>female</i>	...	21,478

UNITED KINGDOM

Figures concerning breed composition of sheep registered in the flock book are not available.

GOATS

AUSTRIA *

Breeds	1939	1946
Saanen	16,221	13,601
Alpine (Gebirgsziegen)	4,866	4,080
Toggenbourg	11,354	9,521
Crossbreeds	291,982	244,820
TOTAL	324,423	272,022

* Since the goat-books were partly lost during the war and they are at present being re-established; these data are not available for the time being.

GOATS (cont.)

BELGIUM

Breeds	1929	1946
Saanen . . . . .	...	400
<i>registered: male</i>	...	47
<i>female</i>	...	150
Chamois Coloured . . . . .	...	4,000
<i>registered: male</i>	...	53
<i>female</i>	...	200
Crossbreeds (approximately) . . . . .	...	70,000
TOTAL	157,963	73,700
<i>registered: male</i>	—	100
<i>female</i>	—	350

FRANCE

There are no goat books in this country.

HUNGARY

In 1939 there were 214 goats of the Gessenay (Saanen) breed; in 1946: 4,611. The rest of the goat stock is composed of crossbreeds. (Total number of goats in 1939: 42,820 and in 1946: 94,228).

IRELAND

Goat breeding is of little importance in this country, consequently no census is taken.

ITALY

Breeds	1939	1946
Alpine	45,000	40,000
Maltese	15,000	10,000
Sicilian	22,000	17,000
Calabrian	20,000	15,000
Crossbreeds	1,766,000	1,222,000
TOTAL	1,868,000	1,304,000

LUXEMBOURG

In Luxembourg goat breeding is of no importance. There are no goat books in this country. Figures concerning the breed composition not available.

NETHERLANDS

Practically all the goats belong to the Netherlands improved native breed. Total number of goats in 1942: 141,237.

POLAND

In 1946, 974 he-goats and 1,800 she-goats of the Gessenay (Saanen) breed were registered in the goat-book of this breed. (Total number of goats in 1938: 786,710 and in 1946: 547,000).

SWITZERLAND

Breeds	1936	1941
Saanen	34,338
<i>registered: male</i>	...	389
<i>female</i>	...	9,405
Toggenbourg	20,082
<i>registered: male</i>	...	2,842
<i>female</i>	...	29,373
Alpine Chamois	181
<i>registered: male</i>	...	4,562
<i>female</i>	...	6,683
Appenzell	28
<i>registered: male</i>	...	714
<i>female</i>	...	19,399
Grisons	104
<i>registered: male</i>	...	2,017
<i>female</i>	...	9,503
Verzasca	234
<i>registered: male</i>	...	88
<i>female</i>	...	7,656
Valais Black-neck	14
<i>registered: male</i>	...	50,995
<i>female</i>	...	27,677
Crossbreeds	220,500
Unknown breeds	214,700
TOTAL	851
<i>registered: male</i>	...	19,792
<i>female</i>

GOATS (cont.)

UNITED KINGDOM

Breeds	1939	1946
Saanen . . . . .	...	2,700
<i>registered: male</i>	36	26
<i>female</i>	58	50
British Saanen . . . . .	...	15,900
<i>registered: male</i>	44	128
<i>female</i>	266	466
British Alpine . . . . .	...	4,200
<i>registered: male</i>	14	48
<i>female</i>	36	228
Toggenbourg . . . . .	...	2,700
<i>registered: male</i>	18	8
<i>female</i>	56	16
British Toggenbourg . . . . .	...	10,600
<i>registered: male</i>	18	46
<i>female</i>	56	196
Anglo-Nubian . . . . .	...	1,000
<i>registered: male</i>	42	41
<i>female</i>	56	168
Crossbreeds and unknown breeds . . . . .	...	15,900
<i>registered: male</i>	28	36
<i>female</i>	226	476
TOTAL . . . . .	...	53,000
<i>registered: male</i>	200	333
<i>female</i>	754	1,540

PIGS

AUSTRIA *

Breeds	1939	1946
German Edelschwein	1,415,063	745,192
German improved Landschwein	849,638	447,115
Crossbreeds	566,025	298,077
TOTAL	2,830,726	1,490,384

* Since the pig-books were partly lost [during the war and they are at present being re-established, these data are not available for the time being.

BELGIUM

Breeds	1929	1946
Large Yorkshire	5,000
<i>registered *</i>	...	2,240
German improved Landschwein	15,000
<i>registered *</i>	...	7,766
Red and Black pied and cross breeds	755,247
TOTAL	973,205	775,217
<i>registered *</i>	...	10,006

* Of which 10-20 % males.

FRANCE

The following breeds are mentioned as being of chief importance: Large White Yorkshire, Craonnaise, Limousine, Normande, Bretonne. Figures concerning the breed distribution not available. In 1940, 64 boars and 383 sows were registered in the pigbook of the Large White breed. In the same book in 1946, 113 boars and 1,091 sows were registered.

HUNGARY

Breeds	1939	1946
Large Yorkshire	373,121	97,176
<i>registered: male</i>	128	59
<i>female</i>	1,283	592
Cornwall	53,303	1,806
<i>registered: male</i>	18	8
<i>female</i>	183	84
Berkshire	106,606	33,528
<i>registered: male</i>	36	16
<i>female</i>	366	169
Mangalitza	1,832,571	398,074
<i>registered: male</i>	1,700	531
<i>female</i>	17,000	3,313
Crossbreeds	1,299,542	796,408
TOTAL	3,665,143	1,326,980
<i>registered: male</i>	1,882	414
<i>female</i>	19,832	4,158

PIGS (cont.)

IRELAND

Practically the entire pig population belongs to the Large White Irish breed. (Only a small percentage of pigs are registered in the pigbooks).

ITALY

	1939	1946
Large Yorkshire	520,000	480,000
<i>registered: male</i>	450	150
<i>female</i>	1,500	500
Large Black and derivatives	100,000	80,000
<i>registered: male</i>	200	100
<i>female</i>	600	300
Pappuccini d'Anghiari	130,000	120,000
<i>registered: male</i>	100	80
<i>female</i>	250	150
Caserta and derivatives	120,000	85,000
<i>registered: male</i>	200	500
<i>female</i>	300	100
Romagna, Lucania and Gargano	110,000	110,000
Friuli black and Valtellina	80,000	50,000
Crossbreeds	2,242,000	2,085,000
TOTAL	3,302,000	3,000,000
<i>registered: male</i>	950	380
<i>female</i>	2,650	1,050

LUXEMBOURG

Practically the whole pig population belongs to the improved native breed; (in 1946, 42 males and 127 females were registered in the pig-book). Numbers in 1939: 154,727 and in 1946: 78,290.

NETHERLANDS

Breeds	1939	1946
Large Yorkshire	401,585	195,391
<i>registered: male</i>	326	494
<i>female</i>	1,409	4,225
Dutch improved Landschwein	1,151,828	972,551
<i>registered: male</i>	1,007	901
<i>female</i>	15,447	19,850
TOTAL	1,553,413	1,167,942
<i>registered: male</i>	1,333	1,395
<i>female</i>	16,856	24,075

POLAND

Breeds	1938	1946
Large White	60
<i>male</i>	200
<i>female</i>	139
White Polish with pointed ears	1,87
<i>male</i>	36
<i>female</i>	175
White Polish with drooping ears	38
<i>male</i>	156
<i>female</i>
Pulawy
<i>male</i>
<i>female</i>
TOTAL	9,683,650	2,674,100
<i>male</i>	468	373
<i>female</i>	3,295	1,718

SWITZERLAND

Breeds	1936	1941
Large Yorkshire	142,619
<i>registered: male</i>	849
<i>female</i>	4,541
Swiss improved Landschwein	344,648
<i>registered: male</i>	365
<i>female</i>	4,617
Red and Black pied and cross-breeds	14,627
Crossbreeds	161,315
Unknown breeds	100,669
TOTAL	877,500	764,378
<i>registered: male</i>	1,214
<i>female</i>	9,158

PIGS (cont.)

UNITED KINGDOM *

Breeds	1939	1946
Large White	3,100,000	1,400,000
Wessex Saddleback	450,000	200,000
Tamworth	80,000	40,000
Essex	300,000	130,000
Large Black	200,000	100,000
Berkshire	70,000	30,000
Other breeds	194,000	55,000
TOTAL	4,394,000	1,955,000

* The number of pigs registered in pig-books cannot be indicated since entries are made at the time of birth only. In consequence, the number of live registrations at any time is not available.

POULTRY

AUSTRIA *

Breeds	1939	1946
White Leghorn	347,374	245,785
Brown Italian	115,791	81,927
Rhode Island	405,270	286,759
White Wyandotte	57,845	40,963
Sulmtaler	115,754	81,925
Altsteirer	115,788	81,922
TOTAL	5,789,585	4,060,241

* The flock books were lost during the war and therefore data cannot be furnished regarding the number of registered fowl.

BELGIUM

Breeds	1929	1946
White Leghorn . . . . .	...	2,500,000
Rhode Island Red . . . . .	...	2,000,000
Crossbreeds (approximately) . . . . .	...	1,000,000
TOTAL	18,207,522	5,500,000

IRELAND *

Breeds	1939	1946
White Leghorn	638,597	610,529
Rhode Island Red	3,831,581	3,663,175
White Wyandotte	2,075,433	1,984,220
Barred and Buff	319,298	305,265
Light Sussex	1,437,243	1,373,691
Miscellaneous pure-breeds	159,649	152,632
Crossbreeds	7,503,120	7,173,717
TOTAL	15,964,921	15,263,229

* No registration of breeds. Breed distribution is approximate and is based on estimates.

ITALY

Breeds	1939	1946
White Leghorn - Golden Leghorn	23,000,000	20,000,000
<i>registered: male</i>	5,000	3,000
<i>female</i>	42,000	25,000
Brown Italian - Rhode Island Red	2,100,000	1,800,000
<i>registered: male</i>	600	400
<i>female</i>	5,000	3,000
Sicilian and Foggia	2,700,000	2,500,000
<i>registered: male</i>	200	30
<i>female</i>	1,500	200
Ancona and Valdarno	1,000,000	700,000
<i>registered: male</i>	400	150
<i>female</i>	3,000	1,200
Romagna and Padua	800,000	500,000
<i>registered: male</i>	120	60
<i>female</i>	1,000	500
Crossbreeds	34,800,000	29,600,000
Romagna Goose	600,000	400,000
<i>registered: male</i>	900	600
<i>female</i>	1,600	1,200
TOTAL	65,400,000	56,000,000
<i>registered: male</i>	7,220	4,240
<i>female</i>	54,100	31,100

PULTRY (cont.)

LUXEMBOURG

Breeds	1939	1946
White Leghorn.	5,000	4,200
registered: male	600	240
female	4,600	3,760
Golden Leghorn	2,600	2,400
registered: male	280	250
female	2,320	2,150
Rhode Island Red	4,500	4,800
registered: male	500	500
female	4,000	4,300
Plymouth Rock Barred.	1,000	500
registered: male	100	40
female	900	460
Sussex.	800	460
registered: male	70	45
female	730	415
Minorea.	1,200	800
registered: male	120	70
female	1,080	730
Faverolles	800	350
registered: male	90	40
female	710	310
Crossbreeds	504,294	261,955
TOTAL.	520,194	275,465
registered: male	1,760	1,185
female	14,340	12,125

SWITZERLAND

The total poultry stock in Switzerland in 1939 numbered 5,594,000 and in 1946, 4,865,000. - The present composition of the stock is estimated as follows: Leghorn 70 %, Rhode Island 10 %. The rest (20 %) is composed of White Wyandotte, Plymouth Rock, Swiss, Yellow Orpington, Rhineland, Sussex and Brown Italian, and other breeds. For the year 1946 the number of poultry-breeding stations and tested flocks was as follows:

	Stations	Tested flocks
Leghorn.	8,402	9,723
Rhode Island	566	578
White Wyandotte	364	172
Plymouth Rock	183	38
Swiss	221	13
Yellow Orpington	138	44
Rhineland.	68	34
Sussex	339	294
Brown Italian	—	253
Other breeds.	—	551
TOTAL.	10,281	11,700

UNITED KINGDOM *

Breeds	1939	1946
White Leghorn.	6,853,000	6,172,000
Rhode Island Red	38,242,000	30,862,000
Light Sussex.	10,430,000	9,529,000
Miscellaneous pure-breds.	3,475,000	3,087,000
Crossbreeds	10,530,000	12,074,000
TOTAL.	69,530,000	61,724,000

* Number of registered birds not available.

Recent progress in horse-breeding in Finland

(Sent by the Finnish National FAO Committee).

In many countries where power agriculture has made great strides, in the last year or two there has been an odd and rather unexpected change. The farmer who was accustomed to consider the machine as the sole instrument for farming operations, found that it was not all-sufficient. In many instances the horse is indispensable for a whole series of farm operations. The horse best

suited for a modern farm is a light and active type, powerful and at the same time of a gentle and docile disposition. In some wine-growing regions of France the Breton type horse — small but strong — is in great demand, and some of the extensively mechanized large farms in Sweden are contemplating acquiring horses quite different from the heavy Percheron or Ardennes horses so



N° 1 - A mare of the Finnish breed.

highly quoted during the first three or four decades of the century. Breeding of the Ardennes horse, which was still fairly extensive in these regions some fifteen years ago, has now practically ceased.

The mechanization of Finnish agriculture was greatly retarded by the war during which there was a severe shortage of draught animals. As in many belligerent countries this shortage caused



N° 2 - Finnish stallion.

the prices for horses to rise, horse-breeding increased rapidly. Breeders thought that the recovery of the country after the war would be much slower than it actually was, and reckoned upon an increasing demand for draught horses during a fairly long period after the end of the war. The shortage of foreign exchange and in particular of dollars, it was said, would check mechanization of agri-

culture in Finland and would increase the demand for horses. It was also hoped that there would be a market in foreign countries for the Finnish draught horse which has excellent qualities.

The Finnish horse belongs to an intermediate breed and is suitable for more varied uses than the light and heavy breeds. For draught purposes it is just as steady and reliable as the heavy horse which it resembles in build.



N° 3 - Young Finnish stallions on pasture.

The present Finnish horse is the result of very careful breeding and has become a valuable type. Although at first selection was based on the results of trotting races, since then other breeding principles have been applied, also taking into account the economic standpoint. Originally a relatively primitive country horse, the Finnish horse has become an excellent animal suitable for multiple uses in farming and in forestry; it does very useful



N° 4 - Stallion undergoing test for registration in the stud-book.

work in the forests even in mid winter after heavy snow-falls. It requires little attention and is very docile.

The Finnish horse is of average size, rather stocky and well built. A mare of the Finnish breed is about 150-155 cm. high at the withers, 165 cm. long and averages 184 cm. round the girth. The average measurements for stallions are 158-167-

187 cm.; their live weight approximates 560 kg. In breeding the Finnish horse considerable importance is attached to the conformation of the legs; they must be lean and the horn of the hoof must be of good quality.

It is, however, the draught qualities of the Finnish horse which are the most important and which are increasingly being taken into account in breeding today. Before being registered in the stud-book, special tests have to be passed. The mares pull a load on sandy ground; stallions are attached to a motorcar fitted with a recorder indicating the resistance they succeed in overcoming. These tests are rather difficult although the weight is calculated according to the age and size of the animal. In addition to this test the animal must be able to walk 1 km. in a maximum time of 10 minutes. At a trot, coupled to an average-sized vehicle, it should cover 1 km. in 3 minutes at the most. Its

disposition and gait are also taken into consideration by the jury. These tests have eliminated the animals with poor draught qualities and unsuitable disposition and developed a multiple-purpose horse.

At the present moment horse-breeding is undergoing a marked crisis in many countries. In early November the representatives of horse-breeders in the different countries met in Paris to discuss the measures to be taken to make full use of the horse. If the conference were to classify the horse breeds of the world at present, the Finnish horse would undoubtedly compete well with other breeds since it is well adapted to present day requirements.

Fifth International Congress on Animal Production

RESOLUTIONS.

The Fifth International Congress of Animal Production held in Paris 3-10 November 1949 adopted at its closing meeting the following resolutions and recommendations:

Problems of animal feeding.

1. The Congress expressed the wish that:

(a) work should be undertaken at the various specialized laboratories to complete and improve the method of analysis of livestock feedstuffs at present in use;

(b) pending the results of this work, the chiefs of the above-mentioned laboratories should agree on

the use of identical methods of analysing and, particularly, methods of measuring the lipids (ether extract) and the crude fiber should be strictly defined.

2. The Congress recommended that work should be undertaken to complete as soon as possible the tables of digestibility coefficients of certain feeds, making use of the results of experimental work carried out at various laboratories, according to identical methods, on animals of different species.

3. The Congress decided to ask the Council of the European Association for Animal Production:

(a) to establish a special committee at an early date to prepare tables:

(i) showing the energy requirements of animals in systems of measurement recognized as being the best.

(ii) indicating the composition of feedingstuffs. Account should be taken of the varied composition of each product as well as the digestibility coefficients of each category of nutrients, also the mineral and vitamin contents and, as far as possible, the contents in essential amino-acids. This table would afterwards be revised periodically in order to take into account any new information from research in this field.

(b) to take the necessary measures to publish this data and disseminate the publication in the best and most efficient way in every country.

4. Having noted, on the one hand, the differences existing in the various papers submitted as regards the appraisal of protein requirements for the maintenance and production of animals and, on the other hand, the different ways of expressing the nitrogenous fraction of feedstuffs, the Congress asked:

(a) for standardization of the evaluation of the requirements mentioned above and (b) that the Committee of experts requested in paragraph 3 (a) should study the codification of the expressions to be used for this evaluation.

An ideal type of dairy cattle.

1. The Congress expressed the view that the main object in breeding is to obtain a cow which, in accordance with the environmental and marketing conditions, will provide the most economic and well-balanced production of milk, butterfat and meat and, if need be, work.

2. The Congress believed that lifetime production records of cows and progeny tests of bulls are necessary before the most effective selection can be made.

3. The Congress, considering that estimates of heredity of milk and butterfat production vary widely owing to the limited number of samples and varying conditions under which they have been obtained, stated that more studies are needed to determine the relative influences of environment and heredity in various localities having different environmental conditions.

4. The Congress was of the opinion that the primary requirement for a dairy cow is a strong constitution which is shown by a good production, a good resistance to unfavourable conditions including infection, by regular calving, a long productive life in its natural environment and, if possible, a good adaptability to unfavourable living conditions elsewhere;

5. and that the problem of type must be divided into three aspects:

(a) the extent to which external traits are correlated with milk-producing capacity,

(b) the extent to which breeders find it economically desirable to combine in the same animal meat and or work production with milk production, and

(c) the conformation in relation to longevity.

On these three points, the Congress stated that:

(a) external body traits are in most cases not sufficiently correlated with producing capacity to be of much use as guides in selection for high productivity, but obviously conformation of the udder is important for the production capacity of the animal with regard to the quantity of milk and for convenience in milking.

(b) The extent to which breeders will attempt to combine meat and or work with milk production is obviously influenced by economic considerations and environmental conditions, and further studies are needed to determine the extent to which maximum expressions of these characteristics may be obtained in the animal.

(c) As the reports show no evidence on the correlation between conformation and longevity, except the experience of the breeders that attention must be paid to conformation in order to prevent the weakening of the animal, further investigations have to be made to find out whether this opinion of the practical breeder is right.

Artificial insemination.

The Congress:

1. expressed the wish that, with a view to render comparable the results obtained in all the artificial insemination centres, the study of the method of calculation of the percentage of successful inseminations be put on the agenda of the next Congress;

2. expressed the wish that in order to facilitate selection of bulls for artificial insemination, production recording and herdbooks be used as widely as possible, since these form the basis for all selection. Effective liaison between organizations for production recording and herdbook organizations should ensure that the herdbooks centralize all information likely to guide buyers when choosing sires;

3. drew the attention of the directors of A.I. work to the importance of an early determination

of lethal genes among bulls intended for artificial insemination ;

and recommended that the choice of bulls intended for artificial insemination be regulated and that in countries where it is impossible to supply proven bulls to centres, the choice of the bulls be made on the basis of requirements even more severe for already improved female stock ;

4. considering that improved cattle imposes greater requirements for its rational maintenance, recommended that simultaneously with the genotypical improvement derived from the use of artificial insemination, hygienic and feeding conditions be improved according to the new requirements of the stock ;

5. considering the general use of artificial insemination may present certain inconveniences,

expressed the wish that all measures be taken to maintain a sufficient number of strains and distinct lines on which it will be possible to rely in order to obtain further improvement of the breeds ;

and that, in particular, the extension of artificial insemination to areas of stock breeding where the average sanitary situation of the cattle is recognized as satisfactory be avoided, provided that the regulations for community breeding are carried out, if the legislation in force provides such ;

6. recommends that studies be continued as to the best methods of progeny testing.

Coordination of zootechnical research.

A. The Congress :

1. stated that facilities and personnel for research on animal production problems are too limited to meet the demands placed upon them by the livestock industry in Europe and it is, therefore, highly desirable that these facilities and personnel be used in the most efficient manner. This will only be possible if unnecessary duplication is avoided and if the work is carried out in such a way that the results of various workers and laboratories supplement each other, thus contributing to the solution of common problems. This means not only that workers and laboratories in a given field, nutrition for example, should supplement each other, but also that the different scientific disciplines should be brought to bear on problems in which they can contribute to their solution ;

2. considered that coordination of research involves cooperation of scientists on a problem of common concern. Regardless of the number of scientists who attempt to coordinate their activities to achieve a common object, the cooperative activity can only be effective if the workers concerned know each other and enjoy mutual confidence, understanding and good-will ;

It naturally follows that effective inter-country cooperation cannot be brought about until at least

a reasonable amount of cooperation is first developed within the countries that undertake to work together ;

3. drew attention to the fact that various agencies exist which can facilitate the development of cooperation among workers in the animal husbandry field in Europe. The European Association for Animal Production will function as a direct avenue for contact between the scientists through its various sections and any committees it may constitute to deal with special problems ;

and asked the Food and Agriculture Organization of the United Nations, as an international organization of governments, to further this work and to bring to the attention of the Governments the recommendations and problems arising out of this work of the E.A.A.P.

B. The Congress stressed the importance of the establishment of close liaison between research work and the application of its results as well as the dissemination of knowledge of techniques developed in this way.

Artificial insemination experiments

In a memorandum presented to the Paris Academy of Sciences (meeting of 26 September 1949) Messrs Martial Laplaud and Robert Cassou report the results of the artificial insemination experiments they carried out by substituting, in collecting the semen, for the two electrode method a rectal bipolar electrode they invented. Their system, said the originators, permitted producing for the first time 3 calves with sperm collected from an impotent bull 3 and a half years old. This sperm was diluted in citrated egg yolk kept in cold storage for 72 hours at the rate of 1 part of sperm to 2 parts of diluter. Fourteen hours later this diluted sperm was inseminated into two cows. One of the cows calved a bull and heifer twin calves ; the other cow dropped a bull calf. The animals are in perfect health and this experiment indicates the possibility of utilizing old sires which have become too heavy, crippled bulls or bulls of any age which cannot be induced to ejaculate their semen into an artificial vagina. This method was tried out on rams, he-goats, cocks, buck-rabbits and boars.

The triennial livestock program in the U.S.S.R.

A program for increasing and improving livestock, and extending over a period of three years, is now being carried out in the kolkhozy and sovkhosy in U. S. S. R.

As one incentive measure the Soviet Government has granted a reduction in the livestock deliveries to

the State for the kolkhozy possessing a large number of animals, while the delivery quota has been raised in the case of farms which until now have not given much attention to their livestock.

The goal which has to be reached at the end of the 1948-51 period is clearly specified. In regard to the kolkhoz livestock, for instance, the following minimum figures must be attained at the end of each year :

	1949	1950	1951
	(million head)		
Cattle	24	28	34
Sheep and goats	62.4	73	88
Pigs	10	13	18

Unfortunately the review *Planovoe Khoziaistvo*,* from which these data have been taken, does not indicate the actual number of different animals possessed by the kolkhozy. It reports as an encouraging sign, however, that in 1948 the cattle numbers had increased by 23 per cent., sheep 16 per cent. and pigs 75 per cent.

The area under forage crops will be extended and the construction of livestock shelters is planned. During the three-year period in question shelters are to be built for 13.1 head of cattle, 32 million sheep and goats and 11.7 million pigs. The State will grant the kolkhozy loans to carry out this work.

The livestock program is based to a large extent on the biological discoveries of Mitchurin and Lysenko. The academician Lysenko wrote in the 'Sozialisticheskoe Selskoe Khoziaistvo' : 'By following the genetic principles of Mitchurin in practical work, it is possible by a skilful selection of crop or stockbreeding conditions, of plant or animal species, to check the perpetuation of organic heredity. The result is what Mitchurin calls "disturbed heredity".'

The Soviet agricultural reviews report new types of cattle obtained through the experiments of technicians of the Mitchurin school. They highly commend the Caucasian-Rambouillet breed of sheep which is outstanding because of its size and quality of the wool. The 'Karavaevo' kolkhoz has bred a new cattle type called 'Kostroma'; the average milk yield per cow is 5,660 kg. per year.

The triennial program plans an extensive effort to increase milk production in the kolkhozy. This effort is directed particularly towards forage improvement and a more general practice of mechanical milking. Beginning from 1951 the kolkhoz cows must produce an average of at least 1,700 to 2,000 litres of milk per year, while those in the sovkhosy, namely the cows belonging to selected herds, must yield an average of 2,500 to 3,000 litres. It is expected that milk as well as meat production will be increased by 50 per cent. in 1951.

Number of cows per kolkhoz and the milk production of 855 kolkhozy in Central Russia

Cows per kolkhoz	Number of kolkhozy	Average milk production per cow kg.	Production index according to type of kolkhoz
1 to 10 . . .	353	1020	100
10-20 . . .	262	1115	109
20-30 . . .	119	1193	117
30-40 . . .	44	1271	125
40 and over	77	1691	166

Particular attention is being given to the mechanization of stock management. It is proposed to increase the number of feed-preparing machines and equipment such as shearing machines. For wool clipping, for example, it is anticipated that the use of mechanical shearers will effect, in a given time, four times the work done with the ordinary system, and will obtain 200 to 400 grams more wool from each sheep. During the hay harvest the farmers will call upon the assistance of the machinery stations to an increasing extent and tractors will be specially equipped for haymaking. In 1948, only 3.2 per cent. of the hay was harvested by machinery.

Belgian Zootechny Congress

According to the papers presented before the 11nd Belgian Bovine Zootechny Congress held on 29 and 30 October 1949, and attended by many prominent experts, the number of cattle in Belgium will reach the pre-war level by 1951. Bovine production represents 45 per cent. of the total income from agriculture and concerns some 270,000 producers. Milk production is expected to attain soon the normal pre-war figure as great progress has been made in improvement of milk output and the butterfat content has increased.

Butter consumption in Belgium amounts to 11 kg. per caput per year.

The conclusions and resolutions of this Congress indicate that an active policy should be pursued with a view to reducing the production costs by means of selection and rational feeding and by the full utilization of the entire bovine production; that the production of suitable fodder on the stock-farm itself should be encouraged and improved; that more active measures should be organized to control infectious cattle diseases; that the possibility of training bovine zootechnical advisers should be examined. In particular, good sires should be kept for artificial insemination. The competent Services of the Ministry of Agriculture, the Technical Livestock Committee and the provincial federations of the livestock associations should determine the qualities required of the bulls, the geographical area of the different breeds, definition of standards, and, in addition, establish data of a zootechnical nature (pedigrees, yield figures, etc.).

* Different numbers.

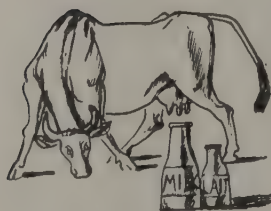
In regard to artificial insemination the Congress concluded 'that it should be employed primarily to improve livestock'. The Congress also advocated 'not adopting artificial insemination in the breeding centres which have to supply improver stock'.

Italian Animal Husbandry Congress

The IXth Congress of the Italian Association for the improvement of animal husbandry was held in Bergamo on 18 September. The Congress considered that it was necessary to encourage rational selection of breeding stock. This selection may be morpho-functional, taking into account the state of health and sturdiness of the animals. The organizations charged with livestock problems should study breeding animals and their progeny with a view to better keeping of the herd or stud books and consequently, a more rational selection. Pedigree bulls should be utilized chiefly for artificial insemination so as to increase their breeding possibilities.

The purchase of bull sires abroad should be made mainly for the purpose of introducing top grade animals into the country, carefully verifying the accompanying pedigree certificates in order to prevent any fraud and speculation.

Examination for approval of breeding animals must be supplemented by serological testing for trichomoniasis and brucellosis. The common mating stations will be subjected to very strict sanitary regulations.



XIIth International Dairy Congress

I. — CHEESES

1. — *Denomination of cheeses.*

The last number of the Bulletin gave the resolutions of the XIIth International Dairy Congress held in Stockholm on 15 August 1949.

As stated in this number, the Congress also passed resolutions on questions concerning the work of the International Dairy Federation.

Abstracts are given of these resolutions.

The Congress requested 'the Food and Agriculture Organization of the United Nations to take all possible steps to summon as rapidly as possible an

international diplomatic conference with the object of drawing up an international Convention on the naming and denomination of cheeses and designation of their characteristics'.

The Congress recommended in particular that this International Convention should include technical articles on which the International Commission for Cheeses of the International Dairy Federation was able to reach unanimous conclusions.

2. — *Classification and definition of the types of cheese in international commerce.*

The Congress expressed the wish that through the offices of the Food and Agriculture Organization of the United Nations and the National Committees of the International Dairy Federation, the Governments of the different countries be recommended to mention in their regulations giving definitions of cheeses manufactured first in their country full details of the classification, according to the specimen form drawn up by the International Dairy Federation. (See following page).

3. — *Improvement in the conditions of production, collection, transport of milk for the manufacture of cheese from raw milk.*

'It is preferable, both for the health of the consumer and for the quality of the foodstuff to secure the production of a wholesome milk on the farm and hygienic collection rather than to encourage defective production and collection by recommending methods intended to mitigate the consequences. Therefore the desire was expressed that, through the offices of the Food and Agriculture Organization of the United Nations and the National Committees of the International Dairy Federation, the Governments be recommended not to take any measures rendering obligatory the pasteurization of milk for cheese-making, except in the case of the manufacture of fresh cheese but shall make every effort to secure an improvement in the hygienic quality of the milk at the farm and to preserve the quality until the moment of manufacture'.

4. — *S.B.R. method for the determination of fat in cheese.*

The Congress informed the International Commission for the Standardization of methods of analysis of the International Dairy Federation of the conclusions of the International Commission for Cheese of the IDF, advising:

(a) adhering to the S.B.R. method, as defined in the International Convention of 1934, subject to adding a preliminary warning with respect to the analysis of particularly hard cheeses difficult to dissolve.

A. — FRESH CHEESES.

COAGULATION	DRAINING	S A L T I N G		
		no salt	on crust	in body
slow	in cloth			
rapid				

B. — LACTIC COAGULATION CHEESES MADE WITHOUT RENNET.

C. — MATURED CHEESES.

CHEESES		TREATMENT OF THE CURD AND DRAINING	MATURING AND PRESENTATION					OBSERVATIONS
			With mould growth		Without mould growth		Various treatments	
			External	Internal	Moist crust	Dried crust		
a. NON-PRESSED CHEESES		Slow coagulation						
		Rapid coagulation						
		Cut curd						
		Cut curd to grain form						
b. PREPRESSED CHEESES	Not scalded	Curd cut to grain form and pressed						
		Curd cut to grain form, ground and pressed.						
	scalded	Curd cut to grain formation, heated and pressed.						

D. — PROCESSED CHEESES.

II. — DRIED MILK

The Congress considered that there were three types of dried milk, namely, full cream dried milk, partially skimmed dried milk and skimmed dried milk. Since there is little trade in partially skimmed milk, it was decided not to take this type into consideration.

Consequently, the two types for which international standards have been formulated, are full cream dried milk and skimmed dried milk.

The Congress therefore worked out a system of classification for dried milk and recommended the adoption of chemical standards; it defined the industrial processes employed as well as keeping quality, labelling and packing.

The decisions reached permitted formulating definitions for the two products, namely, dried full cream milk and dried skimmed milk. The definitions are as follows:

(1) *Dried full cream milk* is milk from which the water has been almost entirely removed by a heating process. The powder, if intended for direct human consumption, shall not contain less than 26 per cent. fat and not more than 4 per cent. water. When the powder is mixed with water in the proportions indicated on the label of the container it shall give a liquid which shall conform in composition to the national official regulations for full cream milk made from the dry product. If the powder is to be used for industrial purposes, it shall not contain less than 24 per cent. fat and not more than 5 per cent. water.

(2) *Dried skimmed milk* is skimmed or separated milk from which the water has been almost entirely removed by a heating process. If intended for direct human consumption, the powder shall not contain more than 4 per cent. water. When the powder is mixed with water in the proportions

indicated on the label of the container, it shall yield a liquid which shall conform in composition to the national official regulations for skimmed milk made from the dry product. If the powder is to be used for industrial purposes, it shall not contain more than 1.5 per cent. fat and not more than 5 per cent. water.

In addition, the Congress passed recommendations tending to define standard methods for the analysis of dried milks. The methods are described in full detail; readers interested in these methods are referred to the original resolutions.

III. — MILK ECONOMY

1. — *Demonstration of the factors influencing liquid milk consumption.*

In view of the importance of having reliable documentation on the factors influencing liquid milk consumption in as large a number of countries as possible, and in view of the necessity of analysing different aspects of the information provided, the Congress recommends that the International Dairy Federation complete and end the draft report submitted to the Commission, taking into account other available results of practical experiments. This report, when finished, will be printed, in order to make the documentation accessible to all interested persons.

The Congress, having noted the proposition made by the International Federation of Agricultural Producers, that the question of the competition between butter and margarine should be studied in conjunction with the International Dairy Federation and the Food and Agriculture Organization of the United Nations, recommends that this study should be undertaken without delay, and that the question should be included in the agenda of the next International Dairy Congress.

IV. — HYGIENIC PRODUCTION AND CONTROL OF MILK

The Committee instructed to study these problems drafted certain resolutions passed by the Congress.

These resolutions were incorporated in the first part published in the preceding number.

Milk Consumption Sub-Committee of the International Dairy Federation (IDF)

The first meeting of this Sub-Committee was held in Paris 26 October 1949. The meeting approved the report submitted on 'Factors influencing milk consumption in normal times' and decided to ask the National Committees of the IDF to collect and send in additional material. The report on the 'Investigation on milk and milk

produce as a part of the national and economic life of the different countries' was found to be out of date in some respects and it was decided that it should be revised. Three delegates were chosen to represent the IDF on the working group recently set up by the IFAP, to deal with the butter-margarine problem. FAO will also be represented. It was decided to ask the National Committees of the IDF to collect information on all legislative measures concerning the protection of butter in competition with margarine. The next meeting of the Sub-Committee was tentatively fixed for spring, 1950.

Second meeting of experts for the standardization of milk-butterfat recording on a European scale

This meeting was held in Paris 31 October - 3 November 1949. Experts from the following countries participated: Belgium, Denmark, France, Italy, Netherlands, Norway, Switzerland and United Kingdom. The meeting considered the draft codification, worked out at a previous meeting of experts in December 1947, and drew up the final draft of an agreement for the standardization of milk-butterfat recording methods in Europe. It was decided to invite FAO to submit this document to Governments and to the organizations responsible for milk recording for adoption by the latter. The meeting considered it desirable that a special committee on milk recording be set up to interpret the agreement and to safeguard its proper implementation. In addition, it was proposed that the incorporation of the proposed Committee in the framework of the European Association for Animal Production be studied.



Low temperature preservation of food stuffs and its economic importance for the trade of some agricultural exporting countries in the Southern Hemisphere

(Abstract of Thesis presented by W. Strigel at Munich University, 1948 - 216 pp., 43 tables, 23 statistical tables, 23 figures, 8 maps and 5 graphs).

SUMMARY: Part I. — *Origin and development and technique.* — The development of food preservation and the importance of refrigeration — Modern methods of preservation (causes of food deterioration and the different preservative me-

thods — Comparison of canned, refrigerated and dehydrated foods). — The refrigeration chain in the production of cold and its application : (a) Refrigerated environment : cold store, cold-storage ship, continental refrigerator transport, stationary refrigerator tanks ; (b) Technical refrigerator processing of highly perishable foodstuffs : quality of raw product, change in structure of product brought about by the action of cold, foodstuffs preserved by low temperature treatment. Part II. — *Large geographical units as economic causes of the origin of stockfarming and fruit-growing regions in the Southern Hemisphere* : 1. Stockfarming regions. 2. Fruit-growing regions. Part III. — *Effect of refrigerator technique on the export economy of perishable foodstuffs of different countries in the Southern Hemisphere* : Argentina - Uruguay - Brazil - Union of South Africa - Madagascar - Australia - New Zealand. Part IV. — *Summary and world economic outlook*.

Part I. — After a brief explanation of the technical concepts as understood in this article, the various efforts to devise methods for the preservation of foodstuffs are reviewed. These efforts were stimulated by the desire to be able to have a rational distribution of foodstuffs independent of time and place. It is interesting to note that low temperature preservation resulted primarily not from the need for stocks accumulation, but from the need for bridging wide distances between different points of the world.

The A. describes the chief preservation methods — canning, refrigeration and dehydration — which are important for the transport of rapidly perishable foodstuffs in world trade, and shows how the natural characteristics of the food products and their ultimate use, as well as the method employed, determine the different stages of the refrigeration chain. The obvious advantage of refrigeration is that it keeps food fresh ; the drawback of this system is that it is expensive.

Comparison of the advantages and disadvantages of the three methods of preservation does not indicate the superiority of one particular method over the others, as each special case has its special requirements as, for instance, the transport of meat, fresh fruit, butter and cheese from the production regions of the Southern Hemisphere across the Equator to the consuming centres of the Northern Hemisphere. In the present stage of preservation methods, refrigeration has proved by far the best system for the transport of large quantities of these products over long distances.

It is pointed out how important it is for the success of refrigeration that the raw product be of good and suitable quality. Details are given on the changes which take place in the inner structure of foodstuffs on freezing, and in this connection the difference between chilled and frozen meat is pointed out.

Part II. — The A. explains the different causes which led to the economic development of certain

regions in the Southern Hemisphere into world important centres of stockfarming and fruit-growing. In this respect, it is pointed out that the amount of rainfall and its distribution over the year play a preponderant part. Four characteristic pasture types can be distinguished by their different qualities and geographical location. In addition to natural factors, the extension of stockbreeding is also affected by the frequency of animal diseases, soil erosion, transport possibilities and the capability of the stockbreeder. The influence of these different factors is also evident from a comparison of the export statistics of the different countries in these regions. By comparing the stock numbers with the population density, pasture quality and export figures, the A. obtains an index for export intensity which indicates better than absolute figures, the export efficiency for those regions.

In the same way the A. describes production conditions in the fruit-growing regions showing the influence of economic factors, such as the increase in the consumption of fresh fruit and the advantage, from the trade standpoint, of the fruit seasons occurring in different periods in the Northern and the Southern Hemispheres. Because of this difference in season, fresh fruit can be brought by means of cold-storage ships from the Southern Hemisphere to markets in the Northern Hemisphere in winter and spring when fruit is scarce. A comparison is made of the harvesting periods of the different fruits in the different regions in the two hemispheres.

Part III. — The A. shows the effects of refrigeration and the development of overseas cold storage transport on the economic position of some countries in the Southern Hemisphere. The extraordinary stimulating and even revolutionary effect of the introduction of modern refrigeration technique is particularly evident in the economic development of Argentina, Uruguay, the Union of South Africa, Australia and New Zealand. One of the most important results of the expansion of refrigerator shipping has been a general improvement in agriculture : Better grade cattle were bred, pastures improved, wells bored, land irrigated and roads built.

Part IV. — The world economic outlook given by the A. in concluding his thesis regards on the one hand, world food economy as a whole and, on the other, further possibilities of low temperature preservation and cold-storage transport in world trade, compared with other preservation methods.

There is no evidence that the present production regions will lose much of their importance through the opening up of other regions, because the increase in world population makes it necessary to intensify production or to find new production regions.

In this respect new possibilities are open in East Africa, an ideal region for stockbreeding, if the tsetse-fly can be eradicated, and in Canada and Alaska by the economic breeding of reindeer.

While the area which can be cultivated and colonized is theoretically sufficient to feed several more milliard people, it should not be forgotten that in certain periods half of mankind goes hungry, which unfortunately shows that despite the progress achieved in civilization and cultivation further efforts are necessary.

From this point of view the refrigeration technique has made a very important if not decisive contribution towards a better and sounder food provisioning system. The future importance of low temperature preservation in world trade cannot yet be foreseen. Refrigerator transport will play a leading role in the traffic of large quantities of perishable foodstuffs until a new method is found which will supersede the complicated and very expensive refrigeration system without affecting the freshness of the product. Desiccation appears to be the oldest method of preserving food and is now increasing in importance. The new methods of desiccation in a high vacuum at temperatures below 0° C. and other methods, however, still require to be tested on an industrial scale. In the meantime, the three systems of preservation — canning, refrigeration and dehydration — will continue to be employed; each has its value according to the type of product, consumers' taste and utilization.

Sugar production

The meeting of the International Sugar Council held in London on 20 October 1949 was attended by representatives of 17 countries and observers from 7 others. According to the report of the Statistics Committee presented at this meeting, the crop estimate for the season ending 31 August 1949 indicates supplies for the free market as amounting to 4,344,000 metric tons (raw value) against a demand for 4,041,000 tons.

The estimates for the year ending 31 August 1950 give 4,389,000 t. for the free market, and requirements are calculated at 4,051,000 t.

In a report of the Special Committee, this Committee proposed (1) to study, according to the development of the sugar situation, the necessity or expediency of negotiating a new Sugar Agreement and (2) to submit to the Council, if need be, its proposals and recommendations for the bases of a new Agreement. This Special Committee, noting that there would not be any significant surplus even in August 1950, pointed out, however, the possibility of overproduction in the near future and considered that an appropriate international body should provide for this contingency. This

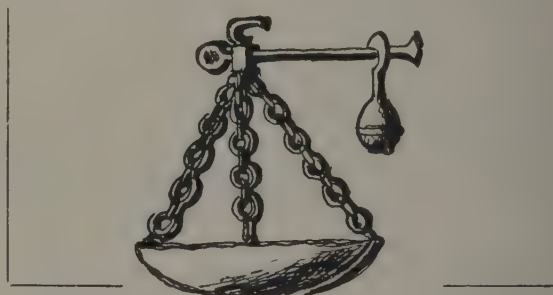
Committee was instructed to submit a report comprising recommendations for the drafting of a new International Agreement, taking into account the project presented by Cuba. This report will be examined by the Council by July 1950 at the latest.

Congress of Agricultural Industries

The VIIIth International Congress of Agricultural Industries will be held in Brussels in July 1950.

The work of this Congress will be divided into four sections: I. Scientific studies (chlorophyll photosynthesis, radio-active isotopes and increase in world food production, standardization of analytical methods, chromatography and industrial analysis, etc.); II. Agricultural studies (weedicides, parasiticides); III. Industrial studies (sugar-refining, fermentation, yeasts, distilling, conology, brewery, vinegar making, cider making, cereals and breadmaking, fecula manufacture, starch making, dairying, chocolate trade, canning, fishery products, aromatics and condiments, feedingstuffs, oils, tobacco, cellulose, fertilizers, parasiticide industry, refrigeration industry); IV. Economic and social studies.

ECONOMICS AND MARKETS



Development Commission

(Sent by the United Kingdom FAO National Committee)

1. The Development and Road Improvement Funds Act, 1909, and 1910, set up the Development Commission, a body normally consisting of eight members appointed by Royal Warrant to carry out certain specified measures for the economic development of the United Kingdom. This area is now restricted to Great Britain. Under the Act of 1909 salaries could be paid to not more than two of the Commissioners.

2. Under the Development Acts of 1909 and 1910 as affected by subsequent legislation the purposes which may be aided (either by way of grant or loan) from the Development Fund are:

(a) Aiding and developing agriculture and rural industries by promoting scientific research,

instruction and experiments in the science, methods and practice of agriculture (including the provision of farm-institutes), the organization of co-operation, instruction in marketing produce, and the extension of the provision of small holdings; and by the adoption of any other means which appear calculated to develop agriculture and rural industries.

(b) The reclamation and drainage of land.

(c) The construction and improvement of harbours in connection with the improvement and development of fisheries.

(d) The development and improvement of fisheries and ¹ any other purposes calculated to promote the economic development of the United Kingdom.

The expression 'agriculture and rural industries' is defined as including agriculture, horticulture, dairying, the breeding of horses, cattle, and other livestock and poultry, the cultivation of bees, home and cottage industries, the cultivation and preparation of flax, the cultivation and manufacture of tobacco, and any industries immediately connected with and subservient to any of the said matters.

It has now been arranged that the Development Fund should not in fact be used to finance certain services (*e. g.* agricultural research and advisory services and agricultural education) which have reached a stage of development at which they have become normal and recognized activities supported directly by the agricultural Departments.

3. Payments from the Development Fund are actually made by the Treasury, who submit to Parliament annually an Abstract Account of the receipts into and issues out of the Fund. A sum of £ 2,900,000 was provided by the 1909 Act for the purpose of the Fund. When this sum was exhausted the Fund was replenished annually by Parliament. The sums provided for the last five years have been as follows:

1945-46	£ 994,000
1946-47	£ 1,000,000
1947-48	£ 600,000
1948-49	£ 720,000
1949-50	£ 820,000 (after taking

into account an estimated balance of about £ 500,000 in hand at the beginning of the year.)

In addition to the annual Parliamentary grant some receipts are paid into the Fund consisting of interest on unexpended balances of the Fund, interest on and repayments of loans, and profits and proceeds on advances. The Treasury attend to the question of the punctual repayment of principal and interest on loans advances from the Development Fund. In this they usually act in conjunction with the Department concerned.

¹ The Commissioners are advised that these words must be read in the light of the preceding words of the sub-section and cannot be held to cover all economic development, but only purposes cognate to those expressly named.

4. The procedure prescribed for applicants for grants from the fund is as follows:

Applications for advances under the Act, whether by way of free grant or loan, are sent in the first instance to the Treasury and by them are referred to the Government Department concerned, which forwards them, together with their report, to the Development Commissioners. When Government departments are themselves applicants, their applications are sent to the Treasury and by them remitted to the Development Commissioners. The Commissioners consider every application so received and report to the Treasury. The Treasury may veto the recommendations of the Commissioners, but is not empowered to make advances from the Fund except on the recommendation of the Commissioners.

5. The bodies qualified to receive advances are:—

(a) Government Departments;

(b) Public Authorities, Universities, Colleges, Schools, Institutions and Organizations or Companies not trading for profit.

In the case of the second group, advances may be made either through a Government department, in which case the whole sum approved is granted, or lent, to the applicant; or as in the case of most advances for research and education, an inclusive grant is made to the Government department and is distributed to the various beneficiaries. It will be seen that advances cannot be made to individuals or to Companies trading for profit.

6. The Commissioners are also empowered to frame schemes with respect to any of the matters for which advances may be made under the Act with a view to their adoption by a Government department or a qualified applicant.

7. It will be seen that the Development Commission:—

(a) Is essentially, and in its usual method of conducting business, an advisory body to the Treasury.

(b) That it differs from an ordinary advisory body in controlling a fund which cannot be used without its sanction.

(c) That it has no executive powers in the usual sense. Once a particular grant has been recommended, the money passes beyond the control of the Commission: but as most grants are recurrent, and are made yearly it can, in fact, control expenditure; for if money paid from the Fund is not used in an approved manner, renewal can be refused. Further, by attaching conditions to the advances recommended, a directing influence over the administration of these advances may be exercised, even when the grants or loans are not recurrent.

(d) That it occupies a position distinct from Government departments in the sense that it is free to report without reference to a Minister, that its recommendations are not subject to confirmation by Parliament, and that its status and procedure are laid down by statute.

8. The Commission is empowered to constitute advisory Committees and to obtain expert assistance. This power has been freely used. There is a standing Advisory Committee on Fishery Research, and from time to time temporary Committees, such as that which in 1921 examined the position of research in animal diseases in this country, have been constituted.

9. Considerable additional sums have been made available for development purposes owing to the policy adopted by the Commissioners of requiring some measure of local assistance as a condition of an advance. There are exceptional cases where a condition of the kind could not in fairness be enforced, but as a rule the principle works well and incidentally provides the Commission with evidence as to the genuineness of the local demand for the particular projects put forward.

10. Where an advance is made from the Development Fund for a purpose which involves the acquisition of land the body to whom the advance is made may acquire land for the purpose, and where such a body is unable to acquire the land by agreement on reasonable terms the Development Commissioners may make a compulsory Order for the purpose. The compensation to be paid is settled by an arbitrator.

11. Prior to the war an annual report of the proceedings of the Commissioners was made to the Treasury, and was laid annually before Parliament by the Treasury.

Measures regarding commodities exchange

Readers are reminded that, under the auspices of the European Economic Cooperation Organization (OEEC), the European member countries are pledged to take measures with a view to attaining in 1951 as complete freedom as possible in trade exchange. The governments are endeavouring to reach this objective progressively by suppressing, between the member countries, the quantitative import restrictions covering several commodities of which lists are published.

At the Annecy Tariff Conference (11 April-27 August 1949) the countries already contracting parties to the general Agreement on customs tariffs of 30 October 1947, and the member countries were invited to append their signature to the Protocol, between 10 October and 30 November for the contracting parties, and 10 October 1949 and 30 April 1950 for the member parties. Lists indicating the respective customs duties of the different countries (consolidated lists or new concessions) are annexed to the Protocol. The concessions granted by

the different countries for import commodities frequently apply to foodstuffs and agricultural produce.

Trade agreements

AUSTRIA

A commercial agreement signed in Vienna on 7 July 1949 between Austria and Bulgaria replaced the agreement of 17 December 1948. Bulgaria will supply mainly fruits and green vegetables, grapes, concentrated fruit pulp, red pimento pepper, nutmeg, eggs, aniseed, coffee in the grain, nuts, in exchange for Austrian manufactured goods, steel, detached railway equipment, tin or glass containers for preserves, etc.

B.L.E.U. (*see also* CZECHOSLOVAKIA)

A trade and payment agreement between the **Belgo-Luxembourg Economic Union** and the kingdom of Greece was signed on 8 November 1949 in Brussels. It came into force immediately, will end 30 June 1950 and may then be renewed for periods of twelve months.

Greek exports to the B.L.E.U. are valued at 100 million Belgian francs and include : wines (17,000 hl); fruits, citrus fruits (200 tons); olives (12 t.). Other agricultural products are subject to the declaration-licence regulations. B.L.E.U. exports include : breeder cows (150 head), condensed milk, canned fish, nitrogenous fertilizers (50,000 t.), phytopharmaceutical fungicides, insecticides, skins, leathers; woollen, cotton, flax and other materials, Congo coffee, copal, cocoa, etc., numerous other manufactured and chemical products, metals and steel.

□

On 15 October 1949 a pre-economic union agreement was signed in Luxembourg between **Belgium, Luxembourg** and the **Netherlands**. From the date of signature of this agreement, bilateral exchanges will be made in general without restriction. Certain categories of commodities products are nevertheless provisionally excluded from this system.

□

The commercial agreement of unlimited duration concluded between the **Belgo-Luxembourg Economic Union** and **Switzerland** on 26 October 1949 came into force on 13 November. It can be cancelled with three months' notice but no earlier than 30 June 1950. For manufactured goods or goods of guaranteed source from the contracting countries, permits will be granted on request without restriction, except for agricultural, horticultural and food products which have fixed listed quotas. Among those of Swiss origin : natural Swiss wines (500,000 Swiss fr.), Emmenthal, Gruyère and Sbrinz cheeses, one third of the quantity in boxes (1.800 t.), soft cheeses (200 t.), goats and breed pigs (200 head respectively). Various other general food products destined for the Congo, mainly tinned milk, cheese, tinned meat may be imported freely.

Among B.L.E.U. exports to Switzerland : ornamental plants and nursery garden products (10 million Belgian fr.), hothouse grapes, flower bulbs and cut flowers, exclusively orchids from 1 May 1950 (5 million B. fr. respectively), witloof chicory

(1,500 t.), seed potatoes (2,000 t.) (in view of Switzerland's short potato crop, she may import 3,000 t. eating potatoes — Bintje — in the period 1 October 1949 to 31 January 1950, and importation of apples will be free owing to the short apple crop until 31 December 1949); seed-grain (1,000 t. or more, according to the need), maize, buckwheat, millet-grass; Congo oil seeds and fruits (1,000 t. respectively), Congo edible, vegetable oil (500 t.), vegetable seed (200 t.), forage seed (175 t.) 30,000 Christmas trees, 25,000 bottles of sparkling and still wines, Congo rice (500 t.), and 50 horses.

BULGARIA

On 9 September 1949, an additional agreement to the trade agreement of 4 October 1947 was signed in Frankfurt between Bulgaria and Western Germany. It only covered the period from 1 September to 31 December 1949 and provided for a goods exchange to the value of 3.3 million dollars each way.

Germany's exports included eggs, cheese, and other food products, essential oils, feathers for bedding, whilst she imported from Bulgaria vehicles, textiles, etc.

CZECHOSLOVAKIA

A complementary agreement between Czechoslovakia and Denmark was concluded in Prague on 26 July 1949. Denmark will furnish 2.2 million Czech crowns' worth of powdered eggs in exchange for motorcycles, cotton fabrics, other textiles, retentment material.

Czechoslovakia and the United Kingdom made recently a five-year Trade and Financial Agreement, which provides for the supply to the United Kingdom of essential goods during the first year to the value of about 4.8 million pounds, including 25,000 tons of sugar and small quantities of other foodstuffs. In the latter years of the Agreement, Czechoslovakia will supply 4.5 million pounds' worth annually of essential supplies, including foodstuffs. Among the other goods to be supplied are soft wood and machinery.

Under the Inter-Governmental Debts Agreement and the Compensation Agreement which were made at the same time, the United Kingdom has agreed to permit the import annually of 5.75 million pounds worth of Czechoslovak manufactured goods in order to help Czechoslovakia to meet payments for exports from the United Kingdom and for U.K. trading services.

Czechoslovakia and Turkey signed in Prague on 9 July 1949 a commercial agreement foreseeing the export of Czechoslovak manufactured goods in exchange for imports of raw materials and Turkish food products. Turkish exports are, in order of importance, tobacco, oil seeds, animal feeding-stuffs, hides, cotton, pulses and tanning products. Czechoslovak exports consist mainly of textile products.

A commercial agreement was signed in Prague on 10 October 1949 between Czechoslovakia and Belgo-Luxembourg Economic Union, to last

until 30 September 1950. It foresees Czechoslovak exports of a total value of 947 million Czech crowns and including wood, and malt.

DENMARK (see also CZECHOSLOVAKIA)

Denmark and Spain made a supplementary trade agreement providing for the supply by Spain of 14.5 million crowns' worth of oranges, tangerines, dried fruit, almonds, wine and skins.

Denmark's trade agreement initialled with France on 10 October 1949, signed on 31 October, foresees for the period 1 November 1949 to 31 October 1950 nearly double the goods exchange of the preceding period. French exports, totalling 300 million Danish crowns, will comprise iron, steel, raw phosphates, potash fertilizers, fish meal, barley (22,500 tons), copra (5,500 t.), palm kernels (5,000 t.), palm oil (1,000 t.), chemicals, tyres, wines, liqueurs, textiles, agricultural and other machinery; whereas Danish exports totalling 270 million Danish crowns will consist of butter (11,150 t.), cheese (4,000 t.), seed-grain (13,000 t.), bacon (2,000 t.), potatoes (62,000 t.), canned milk (11 million Danish crowns), ships, machinery, fish (3 million D.c.), horse (3 million D.c.), mussels (3 million D.c.), graminaceous seed (3 million D.c.), legumes (3 million D.c.), raw phosphates (280,000 t.).

On 3 August 1949, Denmark signed an agreement with Rumania, providing for an exchange of goods to the value of 2.4 million Danish crowns on each side. Denmark will export mainly machines, linseed oil and pharmaceutical products in return for oilcake and Rumanian chemical products.

A supplementary agreement to the current trade agreement between Denmark and Sweden was signed in Copenhagen in the latter part of October 1949. The export quotas have been increased for Sweden from 140 million Swedish crowns to some 186 million Sw. crowns, and for Denmark from 127 million Sw. crowns to 157 million Sw. crowns; the balance will be settled in cash. Sweden exports: timber, cellulose, newsprint, paper, iron and steel products, machinery, fish; Denmark's exports: sugar, meat, fish, machinery, etc. The agreement also foresees that some 15% of the additional quotas should be freely licensed for importation within the framework of the lists in order to safeguard a certain flexibility in mutual trade relations.

FINLAND

A trade agreement has been concluded between Finland and Eastern Germany to replace the agreement of 1948. The new agreement foresees a goods exchange to the value of 4 million dollars in each direction. Germany will furnish machinery, chemical products, electric equipment and optical apparatus in exchange for imports of wood, cellulose, paper, iron pyrites and steel.

A supplementary protocol to the 1948 Finland-Argentina trade and payments agreement was signed on 8 September 1949. It is to be valid for twelve

months. Finnish exports are paper products, newsprint, lumber, fiberboard, boxboard, ceramics, machinery and metal products. Argentine exports to Finland include: rye, 12,000 (metric tons); corn, 5,000; oil cake, 50,000; hides, 10,000; cotton, 6,000, and wool (\$ 4,000,000); as well as fruit, lard, linseed oil, quebracho extract, casein, and other products.

○

On 17 September 1949, a protocol was signed at Helsinki regulating trade between **Finland** and **Hungary** for the period from 1 September 1949 to 31 December 1950. Hungarian exports are to include sugar (10,000 tons), herbs, chemicals, raw materials for leather and paint industries, textiles (\$ 400,000 worth), machinery etc. Finnish exports are to include chemical pulp, newsprint, railway ties, roundwood, other forestry products, and machinery.

○

On 1 November 1949, a new trade and payments agreement was signed between **Finland** and **Italy**. This agreement foresees a dollar joint clearing system and bilateral trade with quota lists excluded in both systems.

○

A protocol regulating trade between **Finland** and **Yugoslavia** was signed on 12 September 1949, to the value of \$ 1,500,000 on each side, for the period 1 October 1949 to 31 December 1950. Yugoslav exports are to include lead, corn, tobacco, quebracho, chemicals, magnesite, pharmaceutical products, sawn hardwood and raw materials for dyes. Finnish exports are to include chemical pulp, Kraft paper, newsprint, cement machinery.

FRANCE (*see also* DENMARK)

An additional protocol has been signed to the commercial agreement already in force between **France** and **Argentina**. It will cover the period 1 September 1949 to 31 August 1950 and foresees exports of essential French goods worth 12 milliard French francs, exchanges to the value of 4.3 milliard francs on each side, and Argentine exports to France worth 1 milliard francs, in recognition for which the Argentine Government will issue import licences for non-essential French products.

France's imports will include 100,000 tons of maize, 100,000 t. of oil-cake, and meat and leather as against exports of vehicles, industrial products, chemicals, etc.

○

A trade and payments agreement has been signed between **France** (including French overseas territories, departments, dependencies, settlements, etc.) and the Republic of **Ecuador**. This agreement which came into force on 25 October, date of its signature, is to last one year, and foresees reciprocal most-favoured-nation treatment between the countries. The French Government has undertaken to grant import licences for Ecuador goods for a minimum value of \$ 500,000 in the

six months following the agreement's signature. Two Committees, one in Quito and another in Paris, will supervise the agreement's application. Among Ecuador products to be exported to France are: bananas, cacao beans, coffee, rice, vegetable ivory, balsam wood, natural or sheet rubber, Peruvian bark, hardwood, hides, leather, quinine, oleaginous seeds and fruits, vegetable oils, vegetable fibres, vegetable wool, shark's liver oil, handicraft products.

○

A new **Franco-Icelandic** trade agreement was signed on 5 October in Paris. It foresees for a period running until 30 September 1950 a total goods exchange of about 1½ milliard francs. In exchange for Icelandic fishery products — frozen fish, (4,500 t.), salted cod's-roe (15,000 barrels), frozen herring (1,200 t.), stockfish, and herring oil (300 t. respectively), other products, mainly tinned fish, cod liver oil, sea-perch skin, etc. worth 40 million fr. — France will deliver fertilizers, wines and spirituous liquors (40 million fr.), textile articles, automobiles, mechanical and electrical equipment, etc.

○

On 1 November 1949, a one-year commercial agreement, dating from the day of signature, was signed between **France** and **Portugal**. It foresees the most favourable treatment possible between the two countries in the mutual granting of import and export authorizations; whilst private compensation deals will not be allowed.

Among the lists of merchandise to be exported from France to Portugal are: natural phosphates (200,000 tons, and more if needed), tanner's bark (2,000 t.), leathers and tanned skins (50 million fr.) wood, plywood, various seeds, 75 breeding horses, wool, cod (2,500 t.), horticultural products (50 million fr.), agricultural machinery (36 million fr.), textile machinery and fishnets (100 million fr.), hand tools and agricultural tools (30 million fr.), agricultural tractors (50 million fr.), machinery for the food industries (30 million), refrigerating material, chemical products, various implements, paper, etc. Among Portuguese merchandise are: common wines (20,000 hl.), sheep and goat hides (300,000 units), beans (6,000 t.), carobs (5,000 t.), animal feedingstuffs (4,000 t.), coffee (3,000 t.), sardines in oil (2,500 t.), groundnuts (2,000 t.), sisal (7,500 t.), chemical paste (eucalyptus, 2,000 t.), oil of whale and other sea animals (1,800 t.), salt (40,000 t.), cork and cork products, dried fruit, wool, groundnut cake, tobacco, wool pyrites, ores, etc.

GERMANY (*see also* BULGARIA, FINLAND)

The representatives of the **Western and Eastern Zones** of Germany signed a trade and payment agreement on 8 October 1949 at Frankfurt. A goods exchange between the zones is foreseen, with certificates issued by the competent authorities mentioned in the lists appended to the agreement.

Payment will be effected by clearing and through the intermediary of the Bank Deutscher Länder and Deutsche Notenbank respectively.

On 19 October 1949 a trade agreement between **Western Germany** and **Hungary** was signed in Frankfurt. It provides for a goods exchange to the value of 42.56 million dollars both ways and is valid until 30 September 1950.

Hungary is to export mainly agricultural products whereas Western Germany will supply iron and steel products, electrotechnical equipment, chemicals, motor cars, precision and optical instruments.

Western Germany and **Switzerland** signed, on 27 August 1949, a trade and payments arrangement operating from 1 September 1949 to 31 August 1950. The principal of free commercial deals was agreed on by both sides, but the quotas for food and agricultural products could not be cancelled. Pending new action, a quota list for these products has been drawn up and approved. Germany's imports, worth 10,500,000 dollars, will include fresh and preserved fruit, cheese, milk, meat, wine, etc. Her exports, worth 3,500,000 dollars, will be mainly hops, malt, brewer's malt, and wine.

ITALY (*see also* FINLAND)

An additional protocol to the **Italo-Argentine** trade and financial agreement of 13 October was signed in Buenos Aires on 8 October 1949. Increased cooperation and exchange between the two countries are foreseen. The protocol provides for purchases, including, on Italy's part and further to the purchases already made and given in the list A of 1949, a minimum quantity of 500,000 tons of wheat each year for the duration of the agreement. Argentina will facilitate the entry of Italian exports listed under B. The quota lists A and B are applicable for a period of twelve months dating from the fifteenth day after signing of the agreement. All payments will be effected in U.S. dollars. The total value of Argentine exports to Italy will reach 158,315,000 dollars: 87,300,000 dollars' worth of cereals (wheat, maize, barley, oats and rye); 12 million of raw and scoured wool; 8 million of frozen meat and 2,200 of boned frozen meat, to be increased by a further 10 millions' worth according to the possibilities of the Italian market; 15 million of raw hides; 4 million of butter and 4 million of cheese (Parmesan type); and various other products of agriculture and agricultural industries, honey, casein, tinned meat, fatty acids, etc.

The value of Italian exports reaches 134,840,000 dollars. They include agricultural tractors (7 millions' worth), agricultural implements and large quantities of motors, machinery, divers apparatus, cotton, silk, wool and rayon fabrics, and lesser quantities of agricultural products: olive oil, almonds, walnuts, etc.

Italy and **Brazil** signed an agreement in Rio de Janeiro on 8 October 1949 with a view to de-blocking the Italian deposits which have been frozen in Brazil since the outbreak of the second World War.

A trade and payments agreement was signed between **Italy** and **Spain** in Rome on 16 November 1949. It provided for a general clearing system to the exclusion of bilateral transactions, and an exchange of traditional products to the value of 27 million dollars each way, as well as quota lists for other products subject to importation controls. Main Spanish exports are expected to include: fresh and frozen fish (1,000 tons); salted anchovies (3,000 t.); canned tunny (3,000 t.); cacao beans (1,500 t.); potash fertilizer (5,000 t.); lamb and goat skins, iron ore, cast iron, mica, etc., turpentine. Main Italian exports are products of the mechanical, chemical, automobile and textile industries and dyes, hems, silk fabrics, etc.

Quota lists have been drawn up for products such as wine, liqueurs, apéritifs, pharmaceutical products, essences and essential oils, medicinal plants, handicraft products and others whose importance is identical for the two countries.

In a one-year trade agreement signed on 15 September 1949 in Mexico City, **Italy** and **Mexico** undertake to accord each other most-favoured-nation treatment. This agreement replaces that of 31 July 1934 which was prolonged to 1 June 1949. Payment will be effected in dollars and in Swiss francs. The possibility of private compensation deals is also foreseen.

A trade and payments agreement between **Italy** and **Norway** was signed in Rome on 19 November 1949. The bilateral system which existed between the two countries has been replaced by a general clearing system.

Among Italian exports to Norway are (in Norwegian crowns): rice (1,200,000), oranges and lemons (4 million), almonds (1,200,000), tomato preserve (1,500,000), wines and vermouth (300,000), olive oil (250,000), wool, cotton and silk fabrics, and artificial fibres (15 million), chemicals, machinery.

Among Norwegian exports to Italy are: frozen fish (9,200,000), boxed fish (1 million), cod liver oil (2,500,000), fish and whale oil (3 million), raw hides (2,500,000), alcohol, iron, paper.

The list of products released by Norway includes hemp, hemp thread, raw hides, etc. and that of those released by Italy, stockfish, cod, herring, industrial fish oil, wood pulp, etc.

A trade and payments agreement between **Italy** and **Sweden** was signed in Rome on 16 November. It will be valid until 30 October 1950. As a general rule, the new bilateral transactions will not be authorized after 15 November. All operations relative to the goods exchange will be regulated through an account in Swedish crowns opened at the Riksbank in favour of the Italian Exchange Office for a maximum of 20 million crowns. The two parties have undertaken to make efforts towards free exchange, in accordance with OEEC's recommendations.

Sweden's exports will include cellulose, sawn and planed wood, paper, etc. She will import principally lemons, oranges, textile products, etc.

cork, veneer, cotton thread, hemp, bergamot and denaturated olive oil, almond oil, and other industrial products, automobiles, etc.

○

An additional protocol to the trade agreement of 28 April between Italy and the Trizone was signed on 28 September 1949. Among Italian exports to the Western Zone of Germany will be (value given in dollars): fresh fruits, citrus fruits, green vegetables and new potatoes (4 million), tomato products (500,000), almonds and dried fruit (2 million), wine (2 million), mustard-seeds and spices (200,000), dairy and meat products (800,000), olive oil (500,000), rice (2 million 500), tripe (100,000), other food and agricultural products (400,000), tobacco (1 million 800), medicinal plants and essential oils (100,000 respectively), raw silk (500,000), schappe (400,000), cotton and wool fabrics (700,000), cork (500,000), rayon, artificial fibres, felts, equipment for paste mills, marble, hosiery, telephone equipment, etc.

Among the Trizone's exports will be breeding cattle (3 million), beer (200,000), natural oils and synthetic foods (200,000), as well as coal, chemicals and industrial products, equipment, agricultural tools and instruments, other instruments, soil, etc

○

A trade agreement for the last quarter of 1949 was signed in Rome between Italy and Uruguay, providing for a goods exchange of 6 million dollars. Uruguay furnished wool to the value of 3 million dollars whilst Italy supplied agricultural machinery, spare parts for engines and automobiles.

NETHERLANDS (see also B.L.E.U., NORWAY, TURKEY)

An agreement between the Netherlands and Switzerland was signed in Bern on 21 October 1949. It is estimated that Swiss exports to the Netherlands will be considerably cut down, 18% of the total quota of Swiss exports licensed in the valid Trade agreement will be exported during the period 1 October 1949.

NORWAY (see also ITALY)

A trade agreement between Italy and Switzerland was signed on 5 November 1949. It provides for the continuance of the procedure of the flexible bilateral exchange system, as well as the continued use of the lists of Italian goods exportable only to Switzerland in free currency. A list of Swiss goods freed of Italian import restrictions is foreseen, and on the Swiss side, apart from some exceptions such as wine, there are no quotas or other restrictions on imports of Italian goods. The list of freed Swiss goods includes: breeding cattle, sawn lumber or logs, textiles, agricultural machinery, hay-threshers and potato drills, milking-machines, milk-pasteurization and leather-making machinery, other machinery and equipment, essential oils, etc. Among Italian exportable goods to be paid in currency are: rice, olive oil, pig-meats, cheeses, straw (50% money value, 50% exchange).

○

A complementary agreement to the trade agreement of 26 February 1949 between Norway and the Netherlands was concluded in Oslo on 23 August.

Norwegian exports are increased by 16 million crowns and Dutch exports by 8 million Norwegian crowns.

Among the supplementary quotas which Norway is to export are: 3,000 t. of hard fats and of edible fish oil, 300,000 crowns' worth of sawn lumber, and pyrites. The Netherlands' further exports will include 1,000 t. of molasses, 5,000 t. superphosphates, electrotechnical and radio apparatus.

POLAND

A trade agreement between Poland and Albania was signed in Warsaw on 24 November 1949. Poland is to send iron ore, sugar, textiles and chemical products to Albania during 1950 and will receive from Albania wood, cotton and ores.

SWEDEN (see also DENMARK, ITALY)

The Sweden-Belgian Joint Commercial Commission under the current trade agreement has agreed to a 10% cutdown of the outstanding Belgian quota imports to Sweden. So far the importation licence has not yet been granted.

○

Sweden and Spain signed a trade agreement providing for mutual goods exchange from 1 October 1949 to 30 September 1950. Sweden's exports amounting to 70 million crowns will comprise timber products, cellulose, newsprint, ballbearings, machinery, etc. whereas Spain's exports totalling 75 million crowns will consist mainly of oranges (75,000 tons), lemons (2,500 tons), almonds, grapes, lead, colophony, potash salts, wolfram ore, textiles and machinery for the textile industry. The balance in favour of Sweden is to cover freight and insurance costs.

TURKEY

On 6 September 1949, Turkey and the Netherlands signed in Ankara a trade and payment agreement, valid until 1 July 1950. No quotas were fixed; exchanges between the two countries will be made according to the provisions in force regarding foreign trade.

UNITED KINGDOM (see also CZECHOSLOVAKIA)

Following discussions in Lima on the Commerce and Navigation Agreement of 6 October 1936 between the United Kingdom and Peru it was agreed to increase the maximum import duty rates on 25 classes of goods, mainly different types of cotton, woollen, and textile goods, as from 1 December 1949. Apart from this change, Schedule 1 and Article 4 which respectively specify and protect all these goods, will remain in force until a new agreement can be negotiated. The Peruvian Government has also agreed to accord as from 1 December, 1949, most-favoured-nation treatment to all U.K. goods of a type such as can be freely imported from all countries.

YUGOSLAVIA (see also FINLAND)

Yugoslavia and the State of Israel have signed an agreement for a goods exchange to the value of 2 million pounds sterling. Israel will import wood and chemicals and will export to Yugoslavia citrus fruits, textiles, olive oil and razor blades.

F I S H E R I E S



Expansion of herring fishery in the Netherlands

by E. Kuijper, *Agricultural expert*

In 1948 the herring landings reached a record figure worth noting. The largest quantity of herrings landed ever registered in the annals of herring fishery, was reported in November of that year. Each motor lugger brought in an average of 5,734 kg. of herring (61 kegs) per day per trip. Per day per trip means each day spent out at sea, the day of departure and that of return to port being calculated together as one day. The nearest average figure, that is, 5,266 kg (56 kegs) per day per trip, was reported in November 1939. With steam luggers, landings amounted to 4,302 kg. (about 46 kegs) in November 1939, and to 5,593 kg. (59.5 kegs) in November 1948.

These figures give an idea of the density of the herring banks, in other words, under certain circumstances, the quantity of fish in the sea during a certain period can be deduced. These figures, however, also represent the fishing capacity of the fleet, that is, they show to what extent the power of the engines, the size and arrangement of the nets, tonnage, etc. enable the boats to carry out fishery operations.

In regard to the quantity of herring in the North Sea, experts consider that there is no question yet of overfishing, as otherwise there would be a decrease in the quantities landed per day of the trip despite the increased capacity of the fishing vessels.

The steam luggers during the period 1914-29 caught an average of 1,709 kg. per day per trip; during 1930 to 1939 the catch was 2,074 kg. In the latter period, therefore, there was an increase of 365 kg. over the average for 1914-29.

It may be asked whether this increase was due to the greater fishing capacity of the steam luggers or else to an increase in the herring numbers. It is not possible to give a straight answer to this question. Seeing, however, that during this period the machine power and the tonnage of the steam luggers have not greatly changed, it is probable

that the higher landings should be attributed to a more general use of small-meshed drift nets in place of the wide-mesh nets which floated at a lower depth.

With motor luggers, the increase during the same period was 613 kg. per day, that is, the average during 1914-29 was 1,181 kg. and in 1930-39, 1,794 kg. This increase may be attributed to the same causes as above, namely, to the use of other types of nets, but also to that of more powerful engines which shorten the time taken in reaching and returning from the herring shoals. In addition, the fishing vessel is less at the mercy of the wind and the marine currents; this is important, especially in autumn, for fishing off the English coast (Yarmouth-Lowestoft) and in the Channel.

For the 1948 season, the average catch per day per trip by steam luggers was 2,818 kg., and by motor luggers 2,788 kg. These figures are much higher than the pre-war averages. Unfortunately, figures for 1946 and 1947 are wanting, and consequently it is not possible to ascertain if the post-war average for several years is higher than the pre-war. It probably is higher, but it is impossible to say if it is due to an increased number of herring or to the increased shipping power. Seeing that the fishing capacity of the steam luggers has changed but little and that the daily catch is some 700 kg. higher, the cause could be a greater abundance of herring.

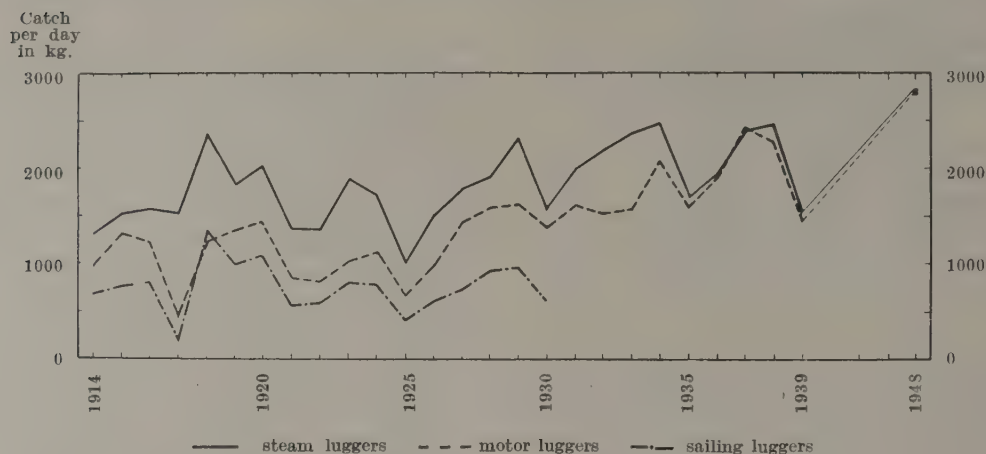
Graph I clearly shows the increase in the fishing capacity of motor luggers, which is now equal to that of steam luggers owing to the use of more powerful engines and to larger tonnage.

After 1925-26, despite fluctuations, the lines of this graph show an increase due to the more general use of small-meshed drift nets, floating close to the surface.

Graph II shows for each month the average landings per day per trip during the period 1930-39 and for the year 1948. The maximum results were obtained in October or November. Generally the herring-fishers fish between mid October and December off the English shores, that is, the part of the North Sea washing the east coast of England (East Anglia) in the vicinity of Yarmouth and Lowestoft. During this period enormous numbers of herring assemble in this area of the North Sea to spawn. In order to show the ratio between the average catch per day per trip in November, and that from May to December, the landings have been indicated in Graph III for the three types of luggers (steam, motor, sailing).

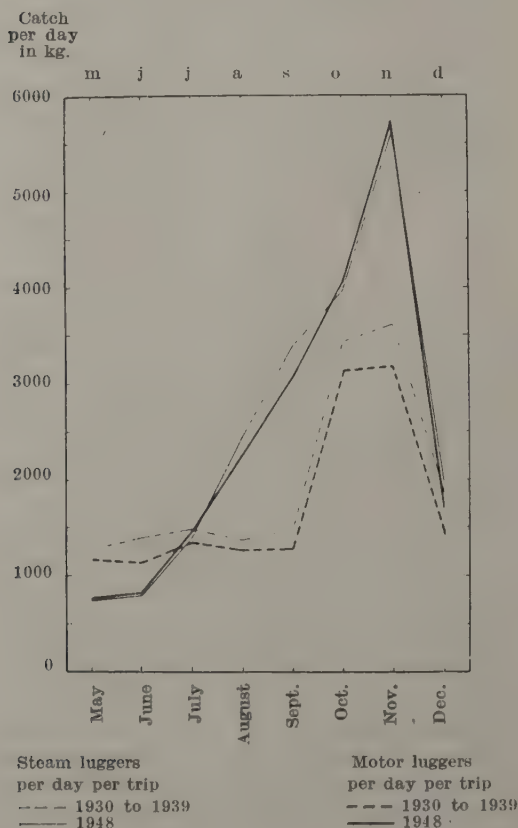
Graph III indicates a five-year period, mainly for the daily catches per trip in November. Maximum landings were obtained in 1924, 1929, 1934 and 1939. The figures for 1940 and subsequent years are missing and consequently it is not possible to know if the November 1940 figures were higher than those for November 1939. This, however, is un-

GRAPH I — *Herring catch with drift nets, per day per trip, of different fishing vessels, from 1914 to 1939 and in 1948*



likely. Moreover, according to the periodicity the maximum landings should have been obtained in 1914 and in 1919, which is not the case on the graph. In regard to output in 1914, it should be pointed out that after the outbreak of the war in August, the

GRAPH II — *Catch per day per trip, per month of different herring fishing vessels (with drift nets) from 1930 to 1939 and in 1948*



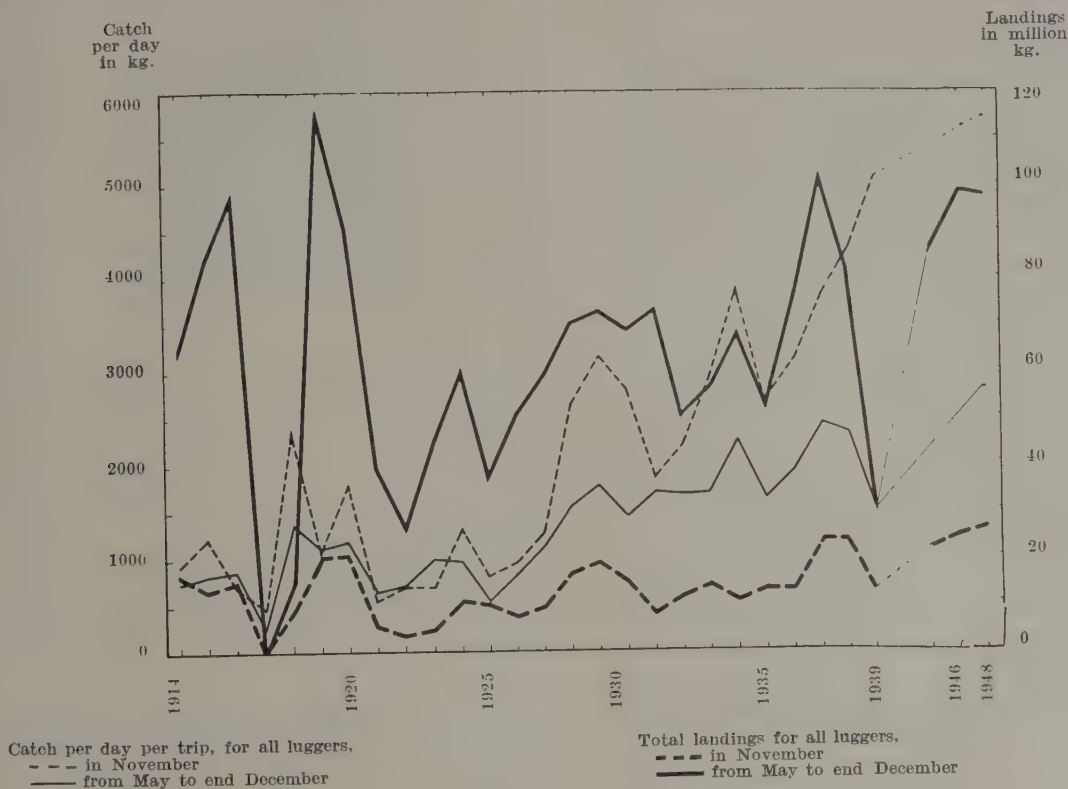
herring fleet was recalled and only again went out to sea later in reduced numbers. Because of the danger of mines, fishery operations could not be carried out in the customary zones. Therefore, it is difficult to compare the 1914 figures with those of normal years. Referring to landings in November 1919, the 'Maandcijfers van de Visserij-statistiek' (Monthly Fishery Statistics) reported that the very rough weather had an unfavourable effect on fishery operations and caused heavy losses in nets. It may be concluded that the herring were abundant, as indicated by the landing figures (see Graph III), but that the bad weather made fishing impossible on a very high number of days. The line indicating the catch per day per trip in November (Graph III), with the maxima in 1918 and 1920 is also an indication that the absence of maximum landings in November 1919 was due to specific causes.

The line marking the average annual catch per day per trip follows, in general, the line indicating the daily catches per trip in November. The absence of periodicity seen in 1914 and 1919 is explained by the fact that the figures for the annual landings per day per trip depend on the landing figures in November per day per trip.

The maximum seen in 1937 instead of 1939 is due to the fact that in 1938 the catch per day per trip from May to September was below normal; it was only in October and the subsequent months that the daily catch per trip became larger. The annual average was considerably reduced. This was more or less the same case in 1939, but it should be noted that war rumours were also the cause of smaller landings at the beginning of the season. Fishing trips often had to be interrupted prematurely. It was not until October and November that the daily catch per trip attained a very high figure (November: 5,050 kg.).

For comparison Graph III also gives the total landings according to type of lugger, as indicated

GRAPH III — *Catch per day per trip and landings by Netherlands herring luggers (with drift nets), from 1914 to 1948*



earlier on, both by year and for the month of November.

In comparing the catch per day of the trip, it should be taken into account that the total landings, contrary to the catch per day of the trip, largely depend on the number of fishing vessels out on the fishing trip. Nonetheless, there is also a periodicity in landings. Deviations are shown here for 1916, year in which a large number (about 100) of new luggers was put into operation, so that the maximum annual landings took place in 1916 instead of 1914. The record landings in 1919 imply a large number of fishing vessels and a heavy daily catch on each trip, namely, an abundance of herring. As already pointed out, it may be inferred that in 1919, in normal circumstances the catch per day per trip, both for November and for the year, would have been heavy.

Attention is also called to the large landings in 1937 which, according to frequency, should have taken place in 1939. As previously mentioned, this divergence can be explained by the poor catch in the pre-season both in 1938 and in 1939, as well as by a strike which took place in May and June 1939, and for 1939, by the war.

As regards the November landings, it should be noted that there is no general tendency to in-

crease as shown in the annual landings in the years subsequent to 1920. Here account has to be taken of the effect of the restrictive measures which had to be taken regularly during the period 1930 to 1937 in order to prevent as far as possible a severe fall in prices due to excessive landings. These measures consisted in prohibiting landing of herring after a certain date (generally in November). The year 1934 offers an outstanding example of the consequences of these restrictions. After 10 November in that year, the landing of salted herring was prohibited; fresh herring, however, could still be landed and consequently several vessels still brought on to the market large quantities of fresh herring. The catch per day per trip was heavy, but as can be seen from Graph III, landings were lower compared with other years.

SUMMARY

It may be concluded from the foregoing that in the Netherlands herring fishery with drift nets presents a five-year periodicity or frequency both as regards catch per day per trip and landings by Netherlands vessels in Netherlands ports. This periodicity corresponds to the periodicity of density of the herring banks in the North Sea in November.

In this month the herring fishery zones are off the east coast of England (East Anglia), and therefore the periodicity concerns the density of the herring in these zones.

It is to be regretted that it is not possible to follow up the control of periodicity. A comparison with data from British sources did not confirm the results obtained, although Hodgson ('The natural history of the herring of the southern North Sea — 1934') mentions a triennial periodicity in British fishery off East Anglia. In addition, the two world wars have made it impossible to obtain accurate information on the war years. There are practically no data for 1917, and during the other years of the 1914-18 period fishery operations had to be carried out by a reduced number of fishing vessels and outside the normal fishery zones. During the last years of the 1940-45 war, herring fishery with drift nets had ceased entirely; consequently, no figures are available. It is therefore impossible to check in any way at all the likely periodicity for the years 1940-45. The results of the 1949 season ought to indicate if, in reality, the catch has again increased in November. Considering the very abundant catch per day per trip in November 1948, it is very probable that there will be a difference. Lastly, there are many uncertain factors which influence the density of the herring banks, such as the salinity and temperature of the sea which also affect the quantity of sustenance the herring may find. The marine currents, the force of the wind and its direction are all of importance in the development of herring stocks.

Antarctic whaling: Prospect for the 1949-1950 season

This season there is still a tendency in every country to increase the number of its catcher boats in the endeavour to obtain the largest portion possible of the maximum 16,000 blue whale units that may be caught each year, according to the 1945 agreement. Norway, who had 108 catchers last year, will have 18 new ones this season. Great Britain will increase her fleet of catchers by three units. No change is noticed in the number of expeditions.

The tonnage and power of these catcher boats are also being increased in order to counterbalance the declining number of whales. In spite of the improvement in the methods of extraction the average daily production per catcher, which was 130 barrels * a day before the war, was only 111 barrels in 1947-48 and 97 in 1948-49.

The decline in numbers seems to be specially significant among blue whales. Over-exploitation has already led to the collapse of whaling in certain

areas, and if the Antarctic whaling industry had to be abandoned, a very valuable source of margarine oil would be lost. In the present serious situation, the question arises whether further restrictions should not be imposed.

An increase in the number of expeditions would naturally make the position still worse. At present, however, only one factory ship, for Argentina, is under construction and lack of skilled personnel will be a serious obstacle to its activity.

Last season's total production was 2,200,000 barrels of oil, the Norwegian share of which was 1,104,233 barrels and the British 758,519. It is improbable that this figure will be exceeded this year.

(Source: United Kingdom Ministry of Food Bulletin)

Fishing industry in Denmark

One of the chief characteristics of the Danish fishing industry is the comparative smallness of the boats employed. In a total of 1,204 motor vessels of above 15 tons, only one exceeds 100 tons gross and 1,191 are less than 50 tons. The Danish seine is still the main gear used by these boats in the North Sea, but a newly invented gear, the floating trawl, has been used for the first time for herring fishing in the Skagerat. This may be adjusted, by a special wire device, to the depth of sea at which the vessel's echo sounder registers the fish shoals. The new gear has proved very efficacious and will certainly contribute to increasing the landings of pelagic fish such as herring and mackerel.

Danish fishermen have noticed a serious decline in the yield of plaice and cod, the two most important kinds of fish for Denmark. Total landings, however, are kept at their former level by further development of the herring fisheries and by the fishing of more remote waters.

Denmark's fish export situation is still good, especially since the German market has reopened.

(From the Danish Annual Report to FAO).

Utilization of seaweed in Norway

Under the auspices of the Royal Norwegian Council for Scientific and Industrial Research, a special research institute has been founded to promote utilization of seaweed resources.

There is a great profusion of brown algae along the coast of Norway; these contain useful inorganic and organic substances, including algin. This acid and its salts have multiple uses in the production of such diverse products as textiles, plastics, cosmetics, photographic films, ice creams, etc.

The institute is in charge of investigating the seaweed resources, promoting the development of the Norwegian seaweed industry and improving the methods of extraction.

* 6 barrels of whale oil = 1 long ton.

FORESTRY



Fifth Session of the Timber Committee of the Economic Commission for Europe

The Fifth Session of the Timber Committee of the Economic Commission for Europe, held in Geneva in September, was attended by the representatives of sixteen Eastern and Western European countries, Canada and the United States.

Reviewing the European softwood situation, the Committee came to the following conclusions:

(1) European exporting countries may expect to sell all the softwood available for export in 1949, while importing countries will thus be able to cover practically their entire effective demand. If present estimates prove correct, there should be no danger of a timber shortage in 1950. However, as a substantial change in the situation may occur when the exceptional timber supplies resulting from forest fires in France have been absorbed, the importance of increasing export supplies of softwood for 1951 and beyond remains unchanged.

(2) The pitprop figures for 1949 may show a surplus of approx. 210,000 cubic metres. The 1950 situation, although presenting no serious problems, should nevertheless be kept under careful review.

(3) Available information on the international pulp situation as it affects Europe calls for no action by the Timber Committee. (This conclusion, drafted after the reading of the report of the FAO world conference on wood pulp problems held in Montreal, April 1949, was unanimously accepted by the Committee, with reservations made by certain delegates.).

(4) The continuing existence of the Committee is obviously necessary, both in the interests of producing and consuming countries, and in view of the timber problem's importance in the economy of Europe. (This conclusion was unanimously carried). Expressing sympathy to the Government of France on the French forest fire disaster, the Committee noted the fact that for a year or two France would be transformed from a country normally

covering half of its softwood needs by imports to a substantial exporter of softwoods.

In accordance with the desire of the French delegate, the Committee merely noted that negotiations had been initiated with several countries for disposal of the softwood which France is compelled to export. The Committee expressed its willingness to review the matter further should the French Government's present efforts to sell its timber surplus meet with difficulties.

The situation was reviewed with regard to the negotiations between three countries, Czechoslovakia, Finland and Yugoslavia, and the International Bank and various Western European Governments for credits and credit underwriting for the purchase of timber equipment.

The Committee expressed interest in, and the wish to be kept informed on possibilities of future softwood supplies from Brazil. It assumed that Brazilian producers and exporters would examine the marketing possibilities for their woods in the normal manner. Delegates hoped that Brazilian industrialists would utilize European experience and wood-working machinery.

The following countries were represented at this Session: Austria, Belgium, Canada, Czechoslovakia, Denmark, Finland, France, Greece, Italy, Luxembourg, Netherlands, Norway, Poland, Sweden, Switzerland, United Kingdom, United States of America and Yugoslavia. The Secretariat was provided by the joint ECE and FAO staff.

European Commission on Forestry and Forest Products

A Meeting of the European Commission on Forestry and Forest Products was held in Geneva in September 1949 under the auspices of FAO. Special attention was given to technical requirements necessary to increase the productivity of European forests. The Commission agreed that member countries should provide all possible aid in helping France recover from the recent disastrous forest fires in the Landes district. The possibility of purchasing fire-killed timber which must be used at once, will be especially urged by Commission members.

A programme of study on improving the quality of new forests by introducing elite strains of trees was approved. The introduction of internationally sanctioned certificates, attesting the collection of the seed from satisfactory parent trees, is contemplated.

The Commission approved the report of its Sub-Commission on Mediterranean Problems, including the proposed setting up of demonstration areas for the rehabilitation of damaged soils so common in the Mediterranean region.

The Commission adopted a list of subjects for its next session. Among those chosen for special consideration were reforestation, control of insect

infestations, mechanization of woods operations, and the training of woods workers.

During a day spent in the Commune of Bassins on a field trip arranged by the Swiss Federal, Cantonal and Communal authorities, Commission members were able to observe at first hand the successful coordination of forestry, agriculture and pasturage in land use.

Session of the Poplar Commission

The International Poplar Commission met at the Palais des Nations, Geneva, on 13 and 14 October 1949.

The Commission, which was set up under the auspices of the Food and Agriculture Organization, examined the results of the session held in Belgium and Holland in April last, and drafted its reports on the nomenclature and identification of the black poplars grown in Europe, the utilization of poplar wood in industry (machine wood-pulp, matches, plywoods, etc.) and poplar diseases and insects.

Mr Philibert Guinier (France) took the Chair. Experts from the following countries were present: Belgium, France, Italy, Netherlands and the United Kingdom.

International Bank grants loans to Finland and Yugoslavia

The International Bank for Reconstruction and Development has granted two loans totalling \$5 million to the Republic of Finland and to the Federal People's Republic of Yugoslavia for the development of the timber resources of these two countries. The loan to Finland is for the amount of \$2,300,000 and the loan to Yugoslavia for \$2,700,000. The loans will be used to finance the purchase of timber-producing equipment.

The loans which have been granted are two of a series of loans considered in connection with the so-called Timber Equipment Project developed by the Food and Agriculture Organization, the Timber Committee of the United Nations Economic Commission for Europe and the International Bank with a view to alleviating current and prospective shortage of timber in Europe by expanding production in certain timber exporting countries (Austria, Czechoslovakia, Finland, Poland and Yugoslavia). Negotiations with Czechoslovakia for a loan for a similar purpose are under way. Austria has indicated its desire to participate in the project but has not yet started negotiations with the Bank. Poland has advised the Bank that it could satisfy its timber equipment needs without the Bank financing and therefore would not apply for a loan.

The Timber Equipment Project aims at a cooperative development of East-West trade in Europe.

Second Session of the Latin-American Forestry Commission

The Peruvian Government invited FAO to convene the second session of the Latin-American Forestry and Forest Products Commission, in Lima on 14-20 November of this year.

This Commission came into being in May 1949 as the result of a recommendation of the Latin-American Forestry and Forest Products Conference held at Teresopolis, Brazil, in 1948. Following approval of the recommendation by the 1948 FAO Conference, the Commission held its first meeting at Rio de Janeiro in May of this year.

The second session of the Commission examined recommendations made at the first session relating to specific problems of concern to all Latin-American countries. These included study of the project for establishing a Latin-American Forest Research and Training Institute; standardization of nomenclature of tree species and of sawn lumber; markets for Latin-American timber; forest development and industrialization plans; forest products statistics; and activities of the FAO Forestry and Forest Products Working Group for Latin America, which has its headquarters in Rio de Janeiro. This Working Group provides the technical secretariat for the Forestry and Forest Products Commission.

Forestry equipment in French Africa

Mr Tony Revillon, Secretary of State for Overseas France, on his return from Black Africa made the following statement to the *Journal officiel du Bois* *:

In 1945, French Equatorial Africa, a pre-eminently timber producing country, exported 55,977 tons; momentary difficulties reduced this quantity to 35,374 tons in 1947. Last year (1948), however, recovery was very rapid — 136,058 tons were sold during the first ten months. This year there is every reason to expect an export figure of at least 115,000 tons.

Progress is even more striking in the Cameroons. Against 14,961 tons of timber exported in 1945, the colony sold 35,848 tons in 1947 and 49,323 t. in 1948. It is reckoned that a further increase this year will raise exports to 65,000 tons.

Important timber industries, working solely on French capital, have been set up at different points since the liberation. Modern forest management enterprises equipped with high-efficiency tractors are being established in the Cameroons; a large sawmill is being built in Eseka. Industrialization is still more advanced in the Gaboon. The producers show an increasing tendency to effect all

* 'Le Bois, L'Officiel du Bois', Paris, 1949, 66^{ème} année, N° 7.

stages of processing locally: sawing, wood-peeling, veneering; this is a great improvement over the old method of exporting undressed timber.

Several wood-peeling mills are already in full operation. At Port Gentil, an ultra-modern works, with an annual output capacity of 50,000 cubic metres, is nearing completion. The building of this works necessitates employing considerable manpower, and in consequence, workmen's houses are being constructed at the rate of one a week.

The future of timber production depends primarily on the means of removing the timber: rivers, roads, track, sports. To date there are only 31,400 km. of pathways in French Equatorial Africa, of which 8,000 km. are negotiable in all seasons, and only 6,600 km. of poor tracks in the Cameroons.

An extensive four-year equipment program has been drawn up and started for the improvement of the existing pathways so that they will support heavy loads, and for building 2,500 km. of new roads leading to the ports or rivers, and 1,000 km. modern roads in the Cameroons.

At the same time, the fitting up of the ports is being actively carried out. In 1948 the Cameroons ports had to deal with a total traffic of 349,500 tons compared with 275,000 tons in 1947; a similar increase is reported for the other territories.

Erratum

Report on 'World Forestry Congress at Helsinki', p. 209 of No 3, 1949, English edition.

The last paragraph '... reference should be made to the excellent organization of the Congress, for which Prof. Saari, President of the Organizing Committee and Mr E. Leloup, Secretary General of the Congress, were responsible'. should read '... for which Prof. Saari, President of the Organizing Committee and Mr Heikki Leppo, Secretary General of the Congress, were responsible'.

Our apologies are offered to Mr Leppo.



Research in vegetable production in the United Kingdom

(Abstracted from the Bulletin of the Ministry of Agriculture and Fisheries, England)

A station for research in vegetable production in Great Britain has now been established under a governing body constituted as a company limited by guarantee and without a share capital,

with the title 'The British Society for the Promotion of Vegetable Research'.

The members of the Governing Body — twenty-three in number — include nominees of the two Agricultural Departments of Great Britain and the Department of Scientific and Industrial Research, of various learned societies, universities and institutions concerned with horticulture, of vegetable producers large and small (through the National Farmers' Unions of the two countries and the National Allotments and Gardens Society) and of trade interests. The first legal meeting of the Society was held on 13 October 1949. The Chairman of the Society is Professor F.T. Brooks, M.A., of Cambridge University and the Director of the Research Station is Dr James Philp.

The headquarters station, half-way between Warwick and Stratford-on-Avon at Wellesbourne consists of 280 acres of deep sandy loam over gravel or keuper clay; the land is being purchased by the Ministry of Agriculture and will be leased to the Society. The site is admirably suited to research on vegetables, but some time must necessarily elapse before buildings and equipment can be provided, staff engaged and the farm generally developed for research purposes.

The Ministry is also leasing to the Society 150 acres of land which it owns at Paglesham in Essex, for a sub-station primarily to be used for the multiplication of stocks of seed of vegetables bred at the main station or elsewhere. A second sub-station is the former Horticultural Research Station at Cambridge, which has been taken over from Cambridge University and the staff of which will continue to work there until they can be transferred to the headquarters station.

Certain individual research workers have been placed at outside centres in order that they may gain experience in their work for the Society; such centres are the research stations at Rothamsted and Long Ashton and the N.A.A.S. * centre at Wye.

The Society will work in close co-operation with existing research institutions - both those engaged in research on production and those working on processing; and also the experimental husbandry farms and horticultural stations of the National Agricultural Advisory Service.

For the funds for its work, the Society will at the outset depend on grants from the Ministry of Agriculture in London and if stations are to be established in Scotland, from the Department of Agriculture for Scotland.

Extension of subtropical crops to other climatic zones

Up to the present 99 per cent. of the citrus crops in the Soviet Union were grown in Georgia (Cau-

* National Agricultural Advisory Service.

casia). Since, however, the decree of 6 October 1948 was passed, efforts have been made to transplant citrus and eucalyptus to regions which were formerly considered unsuitable because of the climate.

Trials were based on the work of Mitchurin aiming at obtaining new varieties through adaptation from customary to new growth conditions.

A report of the new citrus varieties created is given in the Soviet journals. Attention is called to the frost-resistant tangerine cultivated by Gogvadze, the new grapefruit and lemon types of the agricultural expert Oupenek, the seedless lemons of Turashwili.

It is expected that subtropical crops will now be grown in south Ukraine, Crimea, Moldavia, Azerbaijan, Daghestan, Uzbekistan, Tajikistan and Turkmenistan.

(*Sozialisticheskoe selskoe Khoziaistvo*, February 1949)

National Fruit and Vegetable Congress

The first Fruit and Vegetable Congress for southern Italy was held in Naples from 30 September to 2 October 1949. This Congress recommended that, by means of an appropriate organization, the production of southern Italy which excels in earliness and quality, be enabled to take its place on the foreign market as on the domestic market and that the government, by supporting an early return to free international exchange, endeavour to increase the quota of horticultural products for export; that it revise the inland railway charges and take steps to obtain a reduction in transport rates in foreign countries.

* * *

An Italian National Fruit-growing Congress was held in Ferrara on 9 October 1949 at the same time as an exhibition of autumn and winter fruits. The Congress examined economic and organization problems; the possibilities of selling fruit on the home and foreign markets, taking into account the increase in Italian fruit production; and noted that it was necessary to standardize methods of cultivation, develop refrigerator plants and increase fruit juice production. The Congress also studied technical problems connected with production, improvements of products and disease and pest control.



Some details
about Dutch
women in
rural welfare

by G. SMIT, *Inspectress of agricultural domestic education in the Netherlands.*

I was asked to give some details in this bulletin about what is being done by Dutch women in regard to 'rural welfare'. It is always difficult to know what interests a foreigner. In every country customs and regulations exist which are taken as a matter of course and which therefore are not mentioned to guests as out of the ordinary. Often, too, one's mind is occupied with some new and special activity in which great hopes are placed and this is the type of thing one would like others to see. But experience has taught me that everyday things and everyday activities may be interesting and new to strangers and that on the other hand what we think new and interesting may be commonplace to them. That is why it is advisable to get to know a country through one's own observations and not through reports of written statements. You will be very welcome if you visit us; but until this is the case let me introduce you with my pen to our rural districts.

I shall take you to a village where small farms prevail. You will find here a nursery school, three elementary schools, an elementary agricultural school for boys from 14 to 16 years old and an agricultural school of domestic science for girls of the same age and above. In the Netherlands all education is paid for and directed by the Government. A modest, mostly gradually increasing fee is levied. All teachers are qualified, but not all schools are government schools as a great number are run by associations. Thus, the agricultural school for boys and the agricultural domestic science school for girls have in most cases been established by agricultural organizations. Usually there is an active community in the village; nearly everybody is a member of a farmer's organization, labourer's organization or an organization for the middle classes, besides being a member of a music, recreation or physical culture club and a member of a political organization as well. But everybody is invariably a member of 'het Groene Kruis Society' (the Green Cross). This Society covers the whole country and in every town or village there exists

a section and to this section one or more district-nurses are attached. When the doctor thinks a nurse's services are necessary, he sends for the district-nurse who attends to the patient, and looks after him. The district-nurse goes from house to house on her bicycle and is the good friend of everybody. She unobtrusively instructs the inhabitants in the improvement of hygiene and after she has worked for a certain time her influence is felt. She keeps some nursing requisites at her home which she lends to the members of the Society. This is an important part of woman's contribution towards rural welfare.

But women do more than this in the village. There is for instance a powerful section of the Dutch Association of Countrywomen and of course we have selected for our visit a day on which this Association has a meeting. So we must go to the 'Dorpshuis' (village house) where the meeting is to take place. On our way there we notice that women from the farms, middle-class homes and labourers' cottages are all making their way to the meeting. The 'Dorpshuis' is the centre where all associations meet and is also the meeting-place of the Youth and Development Centre of the village. A small library has been installed which is constantly being restocked from the nearby town's Reading Room and Town Library. Some lady members have decorated the room attractively with flowers and covers. Everyone in turn is a member of the Reception Committee whose duties include the serving of tea and biscuits. The members of the Board take their places at the table. The Board changes frequently so as to allow all members to get acquainted with the different duties. In addition to the village Boards, Provincial Boards and a National Board are elected. These activities represent a definite training in giving guidance, in learning about social problems connected with rural welfare, and about representation on general committees, which enriches and enlarges the minds of its members. The countrywoman is represented on the Netherlands National FAO Committee, on the Advisory Committee for Reconstruction of Farms, in the Institute for Rural Domestic Information, on the Dutch Women's Committee. (The last-mentioned represents all the women's organizations in the Netherlands).

One would imagine that women in small villages were not interested in such activities, but in their own newspaper 'De Plattelandsvrouw' (the Countrywoman) they read about the activities of their organization and send their own representatives to the General Meetings. A group of women from the village we are visiting attended the Dutch Day of the A.C.W.W. (Associated Countrywomen of the World) which was held in Amsterdam in September 1948. There they met other women from thirty-five countries and realized that they do not stand alone. Indeed the countrywomen of the

whole world can exercise a very great influence for the general well-being of humanity.

But let us return to the meeting we are attending. One hundred women are now seated at little tables talking cheerfully until the Chairman asks for silence. She proposes that the meeting start with a song. The Choral Society sings the first verse and then the others join in. The Chairman makes certain announcements; courses in handicraft and other occupations, are being organized by the National Board. Invitations for candidates are solicited; later on these candidates can pass on the knowledge they acquire to other members of the Association. Travelling expenses are paid by the village section. Two new members wish to be enrolled. And so we go on to the next item on the program. A suggestion which has been received, for the exchange of Swiss and Dutch country girls, arouses great interest but must first be discussed at home. The next item on the agenda is the organization of a holiday-outing for the old people of the village. Decorated farm carts will call for the old people and a treat will be arranged for them in the garden of the Dorpshuis. The Choral Society will give a demonstration and their original revue entitled 'Past and Present in the life of the Countrywoman' will be performed. Some discussion follows as to whether husbands are to be included in the invitation but once this question has been approved and the diffident hope revealed that the men will show their appreciation by gifts of money to the always needy Association, a coffee interval follows. After coffee the speaker is introduced. She is a social worker from the Provincial Reconstruction Society for Social and Cultural Work who explains how this society stimulates youth and development work in the villages and promotes social welfare for the neglected and sick. Her society is establishing a Women's Voluntary Aid Committee in every village, in which it would like to see the Association of Countrywomen take an active part. The speaker explains what gaps there are in rural youth welfare, how amusement is sought in towns and how unsuitable customs are introduced into village life. Backward and neglected children are not sufficiently cared for by the community and she demonstrates with examples how this can be improved. The women listen with great attention. No audience listens so quietly and remembers so well as a country audience, for they have but few diversions. They judge cautiously, they must first acquaint themselves with the new ideas and then they make up their minds. The speaker is thanked by applause, and the gift of a home-made cake. Everybody appears to be in favour of the plan. The speaker knows she can now rely on the whole village for support.

And so we go home. We have only seen a glimpse of the activities in one of our villages. In other

villages you will come across other Associations which deal differently with the work. But I hope this has given you an impression of what we try to do to follow the advice of the Rural Welfare Section of FAO's Conference in November 1948, which, by endorsing the recommendation of the Standing Advisory Committee, urges the importance of paying attention not only to the improvement of material conditions such as nutrition, health and housing, supply of clothing and other consumer goods, as well as rural amenities, but also to family life, community education, recreation and use of leisure and other non-material elements in the well-being of country people.

Some organizations concerned with rural welfare in the United Kingdom

(Communication from the FAO United Kingdom Committee).

1. - THE RURAL INDUSTRIES BUREAU

The Rural Industries Bureau was established in 1921 by the Minister of Agriculture. It is the central agency for planning and supervising a national policy designed to maintain and develop rural industries in England and Wales and to provide technical advice and instruction for those engaged in them. The Bureau has been almost wholly maintained by grants from the Development Fund. These grants, which are made on the recommendation of the Ministry of Agriculture, at present amount to approximately £ 100,000 per annum. For its organization in the countryside the Rural Industries Bureau relies mainly on the services of Rural Community Councils. (See 2 (a) below).

2 - THE NATIONAL COUNCIL OF SOCIAL SERVICE

The National Council of Social Service acts in general as a national centre for the various voluntary bodies concerned with many different aspects of social work. The Government Departments concerned with the social services are represented on the Council.

The Rural Department of the National Council of Social Service is concerned in particular with social work affecting rural areas. The following are important aspects of its work.

(a) Rural Community Councils.

The Rural Department of the National Council of Social Service acts as a Headquarters to the Rural Community Councils, which are composed of representatives of statutory and voluntary organizations in the country, having as their aim the betterment of social life. The Rural Commu-

nity Councils receive grants from the Development Fund in respect both of their rural industries work (i.e. the provision of advice, training and equipment for rural craftsmen, under the general policy laid down by the Rural Industries Bureau) and of their general community work. These grants amount to about £ 62,000 per annum.

(b) Village Halls Committee.

The provision of community centres in villages contributes to the amenities which are essential if an adequate rural population is to be retained. A Village Halls Committee of the National Council of Social Service administers a scheme for the erection of temporary village halls, for which advances totalling some £ 100,000 have been made from the Development Fund. The Committee also advises on individual applications for grants for the erection of permanent village halls, as well as considering matters of general policy relating to the development and maintenance of village halls. In this connection it offers advice and assistance to local village hall committees.

3. - THE RURAL INDUSTRIES LOAN FUND LTD

In 1940 a Rural Industries Equipment Loan Fund was created, by an advance from the Development Fund, from which assistance in the shape of interest-free loans might be given to approved rural craftsmen for the purchase of necessary modern equipment. The Rural Industries Bureau gave technical advice on the types of machine suitable for installation and instruction on their operation, while the National Council of Social Service administered the fund. In 1947 a Rural Craftsmen's Workshops Loan Fund was established from which financial assistance might be given towards the erection of new workshops for rural craftsmen, and the adaptation and improvement of existing workshops.

In 1947 the Rural Industries Loan Fund Ltd. was established under the Industrial and Provident Societies Acts for the purpose of administering these loan funds. The costs of administration, which at present are approximately £ 3,000 per annum, are borne by the Development Fund.

4. - THE NATIONAL FEDERATION OF WOMEN'S INSTITUTES

The National Federation of Women's Institutes is concerned in general with the provision of educational and social opportunities for village women of all classes. The organization is non-party and non-sectarian. Its educational activities range from instruction in gardening, house-keeping, handicrafts, etc., to lectures on public or international questions. Its social activities include games, music and drama, and the organiza-

tion of village functions. There are now some 7,000 Institutes in England and Wales, with a membership of 400,000.

The agricultural Department of the National Federation of Women's Institute which is concerned in particular with domestic production and preservation of food, and with marketing, receives a grant in the region of £ 6,000 per annum in aid of its administrative expenses. A grant of about £ 1,400 is also made in aid of the expenditure of the Handicrafts Department.

5. — THE NATIONAL FEDERATION OF YOUNG FARMERS' CLUBS

Young Farmers' Clubs, on the pattern of the American 4H Clubs, were first introduced into this country between 1921-1924 on the initiative of the late Lord Northcliffe. In 1924 the Ministry of Agriculture assumed responsibility for the development of the clubs, until in 1928 the National Council of Social Service undertook the Central administration. As the club movement grew, however, the National Federation of Young Farmers' Clubs was formed in 1932 as an independent organization to foster its development in England and Wales. The National Federation now has about 1,300 affiliated clubs, grouped in 56 County Federations, with a total membership of approximately 60,000.

The objects of the club movement are two-fold : to provide a country youth organization as part of the general service of youth, and to stimulate an enthusiasm for agriculture and agricultural education in town and country alike. Membership of a club is open to any boy or girl in England and Wales between the age of ten and twenty-five. The activities of the clubs are partly social and partly educational. The educational activities of the clubs include lectures and discussions on agricultural subjects, occasionally forming part of a planned course, together with competitions, demonstrations and instructional classes in manual processes.

The individual clubs are run by the members themselves under the guidance of a voluntary leader, and attached to each club is an advisory committee of local farmers. The Country Federations are run by Executive Committees on which individual clubs, the L.E.A., and other bodies are represented. They usually employ a salaried organizer-secretary. County Federations are financed partly by grants from L.E.As, partly by subscription and contribution from the individual clubs, and at present, and temporarily, partly by a grant from the Carnegie United Kingdom Trust. The National Federation employs a small administrative and clerical staff at headquarters, together with a number of area liaison officers each of whom is responsible for a provincial area. Over 90% of Headquarters expenditure is at pres-

ent met by a joint annual block grant made by the Ministries of Agriculture and Education. The total grant for 1948-49 was £ 20,000. The main source of headquarters revenue outside the Exchequer grant is from the sale of the Federation's technical booklets and monthly journal.

Recommendations of the ILO Permanent Agricultural Committee

The third session of the Permanent Agricultural Committee of the ILO met at Geneva from 1 to 10 September 1940. In addition to the representatives of the Governing Body, the meeting was attended by a group of experts from various countries, representatives of the International Landworkers' Federation, the European Confederation of Agriculture, the International Federation of Christian Agricultural Trade Unions and the International Federation of Agricultural Engineers and Technicians, as well as by representatives of the United Nations, FAO and the WHO.

The Agenda comprised :

(1) *Hours of work in agriculture* — Following discussions based on a report of the Committee on this question, the Committee adopted a resolution recommending in general that '(a) the regulations should apply to all undertakings with the exception of those where only the farmer and members of his family work ; (b) the regulations should apply to the whole of the territory of a country with the necessary regional or local adjustments which may be called for; (c) both in the setting up and in the application of the regulations there should be participation of employers and workers, through their organizations where they exist'.

It was agreed that the regulations should be sufficiently flexible to enable them to have wide application. The Committee recommended that normal hours of work in agriculture should be limited to 2,400 per year, with a weekly limit of 54 hours and a daily limit of nine hours, exceptions being made in cases of accident or urgency.

(2) *Security of employment and occupation in agriculture* — The Committee paid considerable importance to the part the ILO might play in the carrying out of the Technical Assistance Program for Economic Development in collaboration with the United Nations and the Food and Agriculture Organization. The Committee recommended that the ILO should devote particular attention to problems of employment and manpower, general and vocational education, land relationships, wages, cooperation and housing. The Committee further recommended that the question of security of employment and occupation in agriculture should be maintained on the agenda of its next session.

(3) *Medical examination of children and young persons for employment in agriculture* — This question was fully examined for the first time by the Committee. After a discussion of the report submitted by the Office and in which the members of WHO took an active part, the Committee concluded that 'full use should be made of preventive health services, maternity and child health services, services for the prevention and treatment of malaria and tuberculosis, and of social insurance schemes providing health benefits to the families of insured persons'. It was agreed that health examination should be repeated during the course of employment. The Committee recommended 'that there should be established certain standards relating to health examination and periodic re-examination for all countries and that programs for education in health safety and accident prevention should be promoted. Finally the utilization of the rural school for the provision of health services and supervision was called for'.

(4) *Extension of social security to the agricultural population* — The resolution adopted by the Committee called for the same social security protection for full-time employees in agriculture — as well as for seasonal workers as far as possible — as that provided for industrial employees in the countries concerned. The risks to be covered should include : employment injury, sickness, maternity, invalidity, medical care, unemployment, death and old age ; in addition, family allowances should be provided, if appropriate. Independent operators and tenants should be covered against accidents and should be brought under medical care and family allowance schemes. The Committee recommended compulsory contributory social insurance schemes, but suggested that prior to the establishment of these, voluntary action, especially of a cooperative or mutual nature, might be encouraged. The resolution also dealt with the protection of the farmer against production risks such as damage to crops, loss of livestock, fire and floods. It recommended study by each country of the risks involved. Plans should provide for contributions which participants could afford and an amount of protection which, while leaving a part of the loss to be met by those who have suffered the damage, would nevertheless afford sufficient compensation to allow continued production.

Meeting on Cooperatives

A Technical Meeting on Cooperatives was held in Lucknow, India on 24 October to 3 November.

The meeting which was approved by the Fourth Session of the Conference of FAO also recommended that a consulting service on cooperatives be established. The resolution taken at the Conference reads as follows :

'The Conference considers that cooperative societies provide one of the best means of reducing the cost of farm production supplies, credit and marketing, reducing the price of consumer goods to all people, and developing crop insurance and other forms of mutual aid which will enable rural populations to improve production and conditions of life.

'The Conference —

— Therefore commends FAO for the start made in the field of cooperatives, and welcomes the proposal to hold a conference of workers with practical experience in cooperatives in the Far East during 1949 ;

— Recommends that similar conferences be held in other regions as requested ; and further, that the work of FAO on farm credit, marketing, and consumers' and other types of cooperatives be expanded by providing a consultative service to member governments on methods of aiding and developing such cooperative programs, both through the central and regional FAO offices'.

The general purpose of the Meeting was to provide an exchange of opinion and information on the present position in relation to cooperatives, the main problems to be overcome in the development of cooperatives, and the methods which have been, or might be, adopted to overcome these problems in the economic, social and cultural environment of participating countries.

A similar meeting is planned for next year in the Near East.

FAO ACTIVITIES



Fifth Annual Conference of FAO

The Fifth Annual Conference of FAO, which opened in Washington's Shoreham Hotel on 21 November 1949, listened the following day to a statement by Mr H. Truman, President of the United States of America, who welcomed the delegates to his country and lauded the Organization's programme of technical assistance and its initiative in seeking a solution to the commodity problem. 'It is one mark of civilization to be able to produce abundantly, but it is a more important mark

to be able to use abundance for the welfare of mankind', he said.

During the session ending on 6 December 1949, the Conference: elected as its Chairman Mr Oscar Gans, Cuban Ambassador to U. S. A.; elected as Vice-Chairmen Messrs S. L. Mansholt, Minister of Agriculture, Food and Fisheries in the Netherlands, Norman J. O. Makin, Australian Ambassador to U. S. A., Darwish Al-Haidari, Director-General of Agriculture in Iraq; admitted Afghanistan, Indonesia, Israel, Korea and Sweden to membership, thus raising the total figure of FAO membership to 63; postponed action on the application of Spain for membership; decided to establish the permanent site of the Organization in Rome, Italy; re-elected Viscount Bruce of Melbourne to the Independent Chairmanship of the FAO Council, elected Belgium, Burma, Pakistan, Venezuela, United Kingdom and Yugoslavia to replace the 6 outgoing members of the FAO Council (China, Cuba, Czechoslovakia, Netherlands, Philippine Republic, United Kingdom) whose term of office has expired; decided on the principle that the FAO Conference should be held only bi-annually in future but however scheduled the next Conference for April 1951 at the site of the Organization unless the FAO Council, which is to be held in Rome in May 1950 decides otherwise.

Early in the Session, the Conference resolved itself into three Commissions, by whom the bulk of the work was carried out. Commission I, under the chairmanship of Lord Bruce, dealt with the world food situation; Commission II, with Mr Louis Maire of Switzerland as Chairman, with FAO's technical programme; and Commission III, under the chairmanship of Mr B. R. Sen of India, with financial and administrative matters.

Following are summaries of the three Commissions' Reports, which were endorsed by the Conference, thus obtaining the authority of its recommendation.

Commission I (World Food and Agriculture Situation).

The Conference noted that, although the total world agriculture production has regained prewar levels, the supplies available per person are still below prewar and will take 6 or 7 years to reach the former level. In addition, the food composition is inferior to prewar and the recovery in supplies of protective foods will take longer than in those of energy foods. In the international trade situation, the most significant feature is the enormous increase in the share of the U. S. A. and, to a lesser extent, of Canada in world exportation; while the volume of food exports from the rest of the world has fallen some 40% and is recovering very slowly. The dollar shortages in the food-deficit countries create a situation of inherent instability and necessitate the maintenance and expansion of pro-

duction in the soft-currency and underdeveloped areas in order to bring about a more balanced agricultural economy in the world. The primary responsibility for achieving desirable nutritional standards must rest with the national governments and national action. In order to assure a concerted effort with a view to restoring trade and payments equilibrium, the Conference recommended the maintenance of high-value industrial activity and consumer purchasing power in the dollar area, particularly in the U. S. A.; import increases from the soft to the hard currency areas; increase in the competitive power of soft-currency products in hard-currency markets by cost reduction and quality adjustments; maintenance of economically sound relationships of both prices and costs between soft and hard currency countries. At the same time, a plentiful and regular flow of investments from hard to soft currency areas should be encouraged. The Conference recommended that all Governments which have not already done so, should formulate over-all agricultural and food policies and should study any special measures with a view to achieving their declared objectives. In the Conference's opinion, greater attention should be given to the elaboration of such programmes, to production of more nutritionally valuable foods for domestic consumption, diversification of agriculture, development of extension and other governmental services, and improvement and development and wide use of forestry and fishery resources.

The Conference also instructed the Director-General to make a special study on a selecting basis of the measures taken by governments to maintain or achieve certain price relationships — for agricultural products, between their domestic prices and both their export and import prices, for products farmers buy and sell, products sold on the farm and retail, between individual food-prices and prices of other typical consumer goods.

Governments desiring international financing for their agricultural and other development projects should prepare specific and well-documented projects for submission to existing international financial institutions, private or public. When necessary, FAO should assist in the preparation of these projects and the Director-General has been asked to report to the Council and to the next Session of the Conference on instances where suitable projects have been unable to go forward for lack of adequate international financial facilities.

Although the Conference did not adopt the proposal for the establishment of an International Commodity Clearing House, submitted by the Director-General of FAO, it nevertheless considered the need for some additional mechanism and decided to establish a 14-member-government Committee on Commodity Problems, which will work under the supervision of and will be responsible to the FAO Council. This Committee will consider statements from

the governments experiencing difficulties in securing supplies and will transmit them to governments holding surpluses, will make recommendations regarding proposals for disposing of supplies on special terms submitted by governments holding surpluses and, finally, will review information relating to commodity surpluses and deficit situations, and initiate discussion between governments with a view to promoting appropriate international action.

The position of the Committee will be reviewed when the International Trade Organization comes into being; meanwhile the Interim Commission of ITO will be invited to appoint its representative to the Committee.

Commission II (Work of FAO)

The Conference generally approved the program of work submitted by the Director-General for 1950, subject to the amendments made by its own recommendations; the uncompleted portions of the 1950 programme are to be subsequently continued until the member-governments have the opportunity of considering their future programs.

The most important item on the Commission's agenda was the Expanded Programme for Technical Assistance for Economic Development. The Conference fully endorsed participation in this programme as set forth in the Economic and Social Council's Resolution N° 222 (IX) A of 15 August 1949, approved in the UN General Assembly's Resolution of 16 November 1949. The need was stressed for ensuring that the approach to the organization and execution of technical assistance projects is made through the culture and accords with the customary ways and institutions of the local peoples. The Director-General was instructed to accept on behalf of the Organization monies and credits for goods and services and to report to the Technical Assistance Committee (TAC) of ECOSOC through the Technical Assistance Board (TAB), with respect to FAO's activities and expenditures in these programmes.

Priorities were set up for the consideration of requests for assistance in this programme:

Category I – Measures to secure early increase in production of food and other requirements of local populations, including both short-term projects and medium-term projects which may be expected to give results at an early stage;

Category II – Measures likely to result, within a foreseeable future, in an appreciable increase in the external income of the country seeking assistance in the economic development of natural resources, with a view to increasing exports and reducing import needs of goods that can be economically produced in the country, and generally, in assisting in the creation of favourable conditions for investment and expansion of trade;

Category III – Measures of a long-term nature, mainly research and investigation.

This system of priorities must be flexible and where several projects, considered to be otherwise of equal importance, are presented in any of the above categories, priority should be given to projects deemed to be of value to more than one of the requesting countries.

The Conference further recommended that member-governments strengthen or, where necessary, create officially sponsored and well-integrated services contributing to the advancement of agriculture, forestry and fisheries and of rural living, with particular emphasis on extension or advisory services, and instructed the Director General to deal effectively with requests from member-governments for assistance in advising on organizing and applying methods for the extension-education of rural peoples, both from Headquarters and in the field.

In another recommendation, the Conference called on the member-governments to examine their legal powers and administrative machinery with a view to promoting further development of their land and water resources, and on FAO to provide assistance in carrying out this work and to promote inter-governmental consideration of problems in this field which affect more than one country. The Conference also laid down general policies for drafting future programmes of work. The FAO programme cannot and should not be changed lightly from year to year. Consequently, only a limited number of projects, all of a major importance, should be included, so as to avoid dispersal of staff and financial resources over numerous small projects. The tendency to increase projects extending direct aid to member-governments in enlarging production and improving nutrition should be strengthened, if necessary, at the expense of those activities which are of less direct value to those countries that have not yet fully developed food and agriculture administrations. Greater emphasis should be placed on activities aiming at increase in the production of food and primary products. The regular programme of FAO should not be altered as a consequence of the technical assistance programme.

In addition, the Conference welcomed the increasing decentralization of the work and was gratified to note the successful establishment of Regional Councils or Commissions on Fisheries, Forestry and Forest Products and on certain phases of agriculture.

The Conference examined in detail the programme of activities of each of the Organization's Divisions and made a series of recommendations for their future activities.

Commission III (Financial and Administrative Matters).

The Conference studied the financial implications of the transfer of FAO Headquarters to Rome, Italy, which will involve an expenditure of about

\$ 1,300,000. The Conference recommended the establishment by the Council of a Headquarters Advisory Committee and gave detailed instructions on the arrangements of the preparatory work. It should, however, be realized that, as the building wherein the future Headquarters will be housed is not yet completed and as 1950 is Holy Year in Italy, it will probably not be possible to arrange the transfer until 1951.

The Conference then laid down rules to guide relations with non-governmental organizations, recommended for favourable consideration by all interested member-governments a draft agreement on the General Fisheries Council for the Mediterranean, and expedited a number of administrative and financial problems, in particular that of the scale of contributions.

The FAO Council met on 14 November 1949 in Washington to make final preparations for the Organization's Fifth Annual Conference. Another short meeting of the Council took place immediately after the close of the Conference.

Experts on nutrition meet under WHO-FAO auspices

The first meeting on the Joint FAO/WHO Expert Committee on Nutrition took place in Geneva in October. Ten nutrition specialists representing the views of both organizations on food in relation to health discussed plans to raise nutrition levels by offering fellowships, training, consultants, surveys and other technical assistance.

Special attention was paid to measures for the prevention of endemic goitre, and to the problem of pellagra, widely prevalent in Central Africa, where it is said to be responsible for one third of the infant mortality rates.

The following items were also discussed: Analytical methods for the determination of vitamins in foods; Manufacture of synthetic vitamins in underdeveloped countries; Physiological requirements of calories and nutrients; Methods for the assessment of nutritional status.

The following are members of the Joint Committee:

WHO members:

Professor J. F. Brock (South Africa), Faculty of Medicine, University of Cape Town.

Professor J. de Castro (Brazil), Director, Institute of Nutrition, Rio de Janeiro.

Professor G. Bergami (Italy), Director, Institute of Nutrition, Rome.

Dr W. H. Sebrell (U.S.A.), Director, National Institute of Health, Bethesda, Md.

Dr Juan Salcedo (Philippines), Director, Institute of Nutrition, Manila.

FAO members:

Professor M.J.L. Dols (Netherlands), Professor of Biochemistry, Free University, Amsterdam.

Dr Hazel K. Stiebeling (U.S.A.), Children's Bureau, Department of Agriculture.

Professor E. F. Terroine (France), Director, Nutrition Institute, Paris.

Dr V. N. Patwardhan (India), Director, Nutrition Institute, Coonoor.

Lord Horder (U.K.), Adviser to the British Ministry of Food.

Rinderpest in Formosa

In order to combat an outbreak of *rinderpest* in *Formosa* which is threatening the island's 300,000 water buffalo and cattle, various agencies and institutions have joined forces. After concerted action by the U.S. Department of Agriculture, U.S. State Department, FAO, the Thailand Livestock Department and the Hong Kong dairy farm, an ECA veterinarian has arrived in Taiwan, Formosa with a virus sent by FAO from Bangkok, Thailand to begin production of a rinderpest vaccine in an effort to check the spread of the disease. If the disease is not checked, it is feared that at least a third of all the water buffalo and cattle on the island will die.

In Bangkok, where FAO has helped the Thai government to set up large-scale rinderpest vaccine production, the laboratory was asked to send some of the virus needed for making the lapinized vaccine to the Hong Kong dairy farm where it could be stored in the deep freeze unit which is one of the few in that area. On arrival at Formosa the ECA veterinarian helped local specialists to inoculate rabbits with the virus. Each rabbit produces 500 doses of lapinized vaccine within three days of its inoculation. All the cattle in the infected Taiwan area will be vaccinated and the movement of animals in and out of the area will be controlled to prevent the spreading of the disease.

News

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Mr Albert van Houtte, Secretary of the European Regional Office since 1946, has just left Rome where for three years he devoted all his energies to the service of FAO, to take up his new post as Chairman of the Belgian National FAO Committee in Brussels.

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Further plans are under way for holding a meeting of government representatives in early 1950

to consider special problems involved in the successful breeding of livestock under tropical and sub-tropical conditions.

The meeting scheduled to be held in Cairo on 3 October was cancelled.

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Two conferences, one to discuss problems for increasing agricultural production, the other to plan a coordinated attack on the locust pest were recently arranged by FAO in Beirut.



Publications

FAO has just issued a **Fats and Oils Bulletin**, another in the series of commodity studies published from time to time for the information of member governments and other interested groups.

The new bulletin contains an appraisal of the current world fats and oils situation as compared with the immediate prewar position, along with an analysis of the longer-term trends. A comprehensive statistical appendix gives estimates of current world production compared with 1948, 1947, and prewar; detailed statistics of international trade during the same periods; and consumption levels in 1948 compared with those before the war.

The bulletin shows the extent to which most importing countries are still consuming fats and oils at well below prewar totals, particularly as regards soap and non food-fat usage. These losses in supplies are shown to be caused in the main by war and postwar major economic dislocations — and recent droughts — and partly by foreign exchange and other economic difficulties.

In contrast, the report also brings out the substantial surpluses of oilseeds, fats and oils which are now developing in the Western Hemisphere and other hard currency regions, due also to foreign exchange difficulties in the soft currency countries, which absorb the bulk of world imports.

A brief review of the future situation concludes the bulletin. The review indicates a continuation both of short supply prospects for most soft currency importing countries and of the production adjustment problems which already face most countries. These problems range from expansion for some oilseeds or animal fats in some areas to contraction or switches in others in such a manner as will aid in a fuller use of available or potential world resources in this important group of commodities.

The **Fats and Oils Bulletin** is obtainable at FAO sales agents and at the FAO Regional Office in Rome.

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Commercial Fertilizers, No 17 in the FAO Commodity Series, was published in September.

This Bulletin presents data on the world production, distribution, and consumption of the three major commercial plant nutrients—nitrogen (N) phosphoric acid (P_2O_5) and potassium (K_2O), usually referred to in fertilizer practice as nitrogen, phosphoric acid, and potash. The figures cover the years 1946-47 and 1947-48 and the estimated production and consumption for the year ending 30 June 1949.

World agriculture uses million of tons of plant nutrients every year. They are supplied from a wide and diversified range of materials, farm or industrially produced. The total supply of such nutrients available in any country is an increasingly vital factor in maintaining crop production and adequate food supplies for growing populations all over the world.

Commercial fertilizers are becoming increasingly important as a source of supply for one or more plant nutrients, derived chiefly from inorganic or chemical sources, but also in part from organic materials. Commercial fertilizers are also known by such names as 'chemical fertilizers', 'fertilizer compounds', 'artificial manures', or simply 'fertilizers'.

Commercial fertilizers supplying one or more of the three nutrients—nitrogen, phosphoric acid, and potash—are chiefly discussed in this Bulletin because such materials move in world and international trade. Suitable and reliable statistics on their production, distribution, and consumption are available in sufficient volume to enable a world review to be published. On the other hand, data on farm-produced and non-commercial materials are not readily available.

In many countries research and experimental work point to the increasing need for many secondary elements such as magnesium, boron, manganese, sulphur, and calcium. While the lack of production and consumption data on such materials prevents their inclusion in a current review, FAO will compile the data as they become available for publication at a later date. The statistical material is derived largely from official data.

Te new FAO dairy bulletin reports that **Milk production** in 1948 in the major producing areas of the world was at about 90 per cent of prewar output. This is another in the Organization's series of commodity studies.

There was a small increase in milk production in Europe in 1948 — primarily a result of higher yields per cow brought about by a much improved feed situation. While total European feed supplies in 1948-49 were still below the prewar level, they nevertheless were far higher than in the preceding year, when very bad weather was the rule.

The 1948 increases in milk production in Europe were general. Every country except Czechoslovakia, Denmark, and Sweden showed an increase as a result of the material gain in available feed-stuffs.

The increase in Europe, plus an increase of about 4 per cent. in Oceania, was enough to offset a small decline in total milk production in North America. In the United States, the world's largest milk producing country, production was maintained at 97 per cent. of the 1947 level, despite the fact that cow numbers were at the lowest point since 1930. This was accomplished through higher yields per cow. In Canada, as a result of a decline in the output per cow, production fell off three per cent. even though cow numbers increased.

For other parts of the world where milk production is important there is a scarcity of data. In South American countries there appears to have been a substantial increase in milk output between 1934-38 and 1947 or 1948. This is probably what happened in some of the African countries also.

Before the war, the U.S.S.R. was one of the largest milk-producing countries. During the war it acquired additional important dairying areas, and it appears that total milk production in 1948 may have in the neighborhood of 18 to 20 million tons — about 75 per cent. of the prewar production in present boundaries.

India is also an important milk producer from the standpoint of total output, but production per person is very low. Data about milk cows or total milk production are almost totally lacking. Estimates, however, indicate that total output may be as high as 18 million tons. This would make the area third in world milk production, behind Europe and North America. Much of India's milk is derived from buffaloes, and has a high butterfat content.

In 1948 more milk was used in fluid form and less was processed into manufactured products than in the prewar period. (In 1949, however, there has been some reversal of this trend.) Butter production in 1948 advanced over the preceding year, but was only about 75 per cent. of the prewar average. Cheese production also increased in 1948,

and for the world as a whole was near the prewar level, although European output was still at only about 75 per cent of the prewar average.

Butter exports in 1948 from the four major exporters — Denmark, the Netherlands, Australia, and New Zealand — were 20 per cent. above the preceding year, and at about 80 per cent. of prewar. World cheese exports in 1948 were lower than in 1947, due largely to decreases in shipments from the United States. Trade in both butter and cheese in 1949 is expected to exceed the 1948 volume. Most of the butter and cheese trade is among non-dollar countries. Nor do surpluses of butter and cheese seem likely by 1950/51 among the non-dollar countries. But the United States, which has a surplus of concentrated milk, chiefly dried skim milk, in 1949, may still be troubled by surpluses of this commodity during the next few years.

Major sections in the 70-page *Dairy products Bulletin* deal with milk production and cow numbers; milk utilization and production of manufactured products; consumption levels; international trade; trade contracts; export prices; and the outlook for 1949 and the years ahead.

The *Bulletin* is obtainable at sales agents for FAO publications throughout the world; price (U.S.) 50 cents.

FAO Commodity Series No 15 is entitled **Animal Feedingstuffs in Europe**. This bulletin presents a provisional statistical study of the supplies of animal feed-stuffs in European countries. The data is still incomplete as very little is known about this subject.

The Bulletin is in fact published to invite European countries to correct and elaborate the figures presented. Improved silage, new techniques of drying grass, better preservation of grains in storage, and even such indirect means as the elimination of a disease like mastitis, will all play a part in solving the feed-stuffs problem. The spreading of the livestock industries all over the world to the former feed-stuff exporting countries is a desirable development because people in many regions have had an inadequate diet. The more immediate world trade in feed-stuffs between surplus producing countries and traditionally feed-stuff importing countries is an urgent problem. The purpose of this bulletin is to make an analysis of the structure of the European feed-supply situation, especially with regard to the importance of imported feeds.

After examining, in particular, Concentrates, Grain, Grain Offals, Oilcake, Potatoes, Fodder Roots, Hay, Milk and Whey, the conclusion is arrived at that: 'it appears to be possible for Europe as a region in the course of a few years to replace imported feeds by home-grown feeds except in the

case of proteins. It is not a desirable development and offers no advantage for the world as a whole, as the grain and oilseeds should be grown where they can be produced with minimum effort'.



Commodity Series N° 14, **Fibers**, is another in this already well-known FAO publication series. The bulletin is based on statistics and information taken up to 30 June 1949 and comprises data on all the major fibers, cotton, wool, silk, flax and hemp, jute, hard fibers and man-made fibers. The bulletin's 'World Fiber Situation and Outlook' states:

The volume of fibers produced and consumed in the world is approaching prewar levels. Yet, with an increase in world population of about 10% over the last decade, world production and consumption of fibers per caput in 1948/49 were still about 15% below the levels of the last prewar season.

During the first three postwar seasons, world consumption of fibers, while still appreciably below prewar, ran well in excess of current production. In 1948/49, the gap was narrowed. New supply of wool, jute, and silk had to be supplemented from stock but in regard to cotton, 1948/49 was the first postwar season when production exceeded consumption. Output and usage of rayon filament and staple were up sharply and consumption of all fibers, including synthetics, rose from 92% of the 1934-38 average in 1947/48 to 94% in 1948/49.

Despite some slight expansion of world fiber shipments in each successive postwar season, the recovery of world fiber trade in the postwar period has been generally slower than that of both world production and consumption. While the volume of world fiber trade has been held down in part by absolute shortages of supply and increased domestic requirements of fiber-producing countries, the level of effective demand from importing countries remains the dominant factor in setting the pace of world trade recovery. In 1947/48, shortage of foreign exchange had been the most general obstacle to the expansion of world trade in apparel fibers other than raw wool. In 1948/49, the situation was changing, with importers' foreign exchange difficulties being partially alleviated by direct and indirect credit aids and other trading arrangements; but with industrial activity declining in the United States and effective demand for textiles being influenced in a number of countries by the completion of pipeline buying and by growing consumer resistance to high textile prices. While prices of most types of cotton and wool have receded from postwar peaks, their increases over prewar levels still stand in marked contrast to the very moderate change in the cost of rayon staple fiber. Prices quoted for jute and for the major hard fibers have risen even more sharply, compared with prewar,

and have dropped less from postwar peaks than those of most other natural fibers. A comparison with indices of wholesale commodity prices in the United Kingdom and in the United States shows that, in general, prices of natural fibers are still higher, based on prewar, than the combined commodity indices.

In 1947/48, while unit values of imports of apparel fibers into major consuming countries had been high, the unit values of textile exports had been higher still. In 1948/49, the ratios of unit values of fibers to textiles fell back nearer to prewar levels and they were even reversed in some cases.

The recovery of world textile trade has been very much slower than that of textile manufacture. In part, the lowered ratio of textile trade to manufacture, just like the lowered ratio of fiber trade to consumption, reflects the industrial development in a number of countries which now replace imported textiles by goods processed in their own mills from home-grown fibers. The world pattern has also been drastically changed by the disruption of Japan's textile trade which in prewar years used to provide large supplies of cheap textiles for low-income markets.

The inequality of textile consumption levels in different parts of the world has become even more pronounced than before the war. Five high-income countries, accounting for just over 11% of the world population, absorbed nearly one-half of all cotton, wool, and rayon textiles available in 1948. Against this, eight low-income countries, accounting for 30% of the world population, absorbed only 9% of all textiles.

World production of fibers in 1949/50 will probably be higher than in the previous season and may exceed the prewar average by a slight margin, with synthetics representing a little more than one tenth of the total as against one twentieth before the war. For the first time since the end of the war, world consumption of fibers may be slightly below world production. World fiber stocks in all hands in mid-1950 may be about 10% larger than a year earlier, or equal to about 5-6 months' consumption, with stocks of raw cotton accounting for a larger portion of the total than a year earlier. In 1950/51, production of most natural fibers in most areas may continue moderately upward, except for a probable reduction of cotton acreage in the United States. If industrial activity in the United States is depressed in 1950/51, the effects will be felt increasingly in other countries by that time. On the other hand, if economic prosperity levels are high and if major obstacles to the smooth functioning of world trade can be overcome, world consumption in 1950/51 will almost certainly exceed prewar levels for all major apparel fibers other than silk. Even if general economic conditions are favorable, however, rates of expansion of world trade in fibers and textiles will probably continue

to lag behind those of production and consumption of textile raw materials.

The price of 'Fibers', Commodity Series No 14, is 50 cents; it is available from all the Sales Agents for FAO publications.



The French translation of No 7 of the FAO Agricultural Studies, dealing with milk and published in English at Washington March 1949, came out in August, entitled *Vers une meilleure utilisation du lait*.

This 86-page study was prepared by D.A. Soulides, Dairy Manufacturing Specialist, Animal Industry Branch, Agriculture Division of FAO. It is a general survey of the milk question and will be followed by a more detailed investigation covering individual countries or areas.

In the opening chapter the author recalls the shortage of milk and dairy products prevalent in many countries. Although some countries with a highly developed dairy industry dispose of a surplus for export, the amount is not sufficient to meet the needs of milk-deficient areas. Since the milk supply cannot be increased rapidly, the existing production must be utilized as rationally as possible until the long-term improvements planned by the governments and FAO become effective.

The object of this study is to 'indicate where the need for improvement is greatest and which methods are likely in the short run to yield best results in reducing wastage and increasing effective utilization'.

The first part of the publication deals with 'improving milk processing and preservation in milk-deficient areas (fluid milk, fermented milks, concentrated and dried milks, cheese, butter, other indigenous milk products)'. Cooperative organization, especially in milk-deficient countries, is advocated as the best means of coping with the different problems.

The second part concerns 'increasing the utilization of dairy by-products for human consumption' (skim milk, whey, etc.).

A list of the literature cited and references for further reading is appended. Price: 0.75 U.S. dollars.



The French edition of 'Rinderpest Vaccines'. *Les vaccins contre la peste bovine*, which was published in English in March of this year, has just come out (See FAO Bulletin No 2 April-June 1949 — FAO Activities).



Another French edition has also just appeared. This is 'Preservation of Grains in Storage'

Préservation des grains emmagasinés FAO Agricultural Study No 2 mentioned in No 6 of the European Bulletin June-July 1948.



FAO Agricultural Studies No 9 is an illustrated book entitled *Efficient Use of Fertilizers*. It is edited by Vladimir Ignatieff, of the FAO Agriculture Division. Many international experts have contributed to this monograph. The book is divided into eight chapters entitled: The Role of Fertilizers; Plant Nutrients; The Necessity for Organic Matter; Commercial Fertilizers and Soil Amendments; Use of Fertilizers, Manures and Soil Amendments; Crop Sequences and Fertilizers; Plant-Nutrient Relationships to Soil Regions; The Farmer and The Agricultural Services.

In the opening chapter we read that:

'The efficient use of manures and fertilizers is one of the most important technical factors in food production. This monograph deals with the subject especially for agricultural administrators and advisers who work with farmers and farm organizations. It is not an exhaustive treatise for technicians. Nor is it a detailed handbook of complete recommendations for particular local areas. Rather, it has a different purpose from either of these — the purpose of helping agricultural administrators and advisers all over the world to spread the available knowledge about fertilizers and their use for crop production. The more significant relations of fertilizers to crop rotation, erosion control, irrigation, drainage, liming, and other practices are dealt with briefly. An attempt is made to present the basic principles simply, as men of experience view them'.

The study is richly illustrated with photographs, tables and maps. Bibliographies of interest to the reader of the various chapters inform on further reading matter.

The price is \$ 2.00.



The French editions of the *Rice Bulletin* and the *Grain Bulletin* Nos 10 and 11 in the Commodity Series, have now appeared. Both these publications are mentioned in No 2 19.9 of the European Bulletin (under FAO Activities).



Nos 10 and 11 of the *Food and Agricultural Statistics Monthly Bulletin* contain interesting data on production, trade and prices. News, in English, French and Spanish, on crops, Statistical Training Centres and Trade Agreements are also included. No 11 contains a note on the scheme for an International Commodity Clearing House which was presented at the 5th Annual FAO Conference on 21 November 1949.

ECE-FAO Timber Statistics Bulletin reveal market trends.

The first quarter of 1949 represented 'an important turning-point' in the evolution of Europe's post-war timber trade, according to the latest issue of the ECE/FAO Quarterly Bulletin of Timber Statistics * available today.

A market review of the period, prepared by a joint secretariat of the United Nations Economic Commission for Europe and the Food and Agriculture Organization, states that 'timber prices, which had stopped rising during 1948, began to drop, but the decrease was smaller and less accentuated than for most other commodities. Timber supply and demand were in temporary balance, but the goods available for export were sold at a more rapid pace than in 1947/48'.

The 27 tables included in the Bulletin indicate, among other things, that during the first quarter of this year there was a major change in the source of United Kingdom sawn softwood imports compared with a year ago. During January through March 1949, the United Kingdom imported from European sources 118,900 standards of sawn softwood. This is 110% above the 56,300 standards she imported from Europe during the first quarter of 1948. (A standard is 4.672 cubic meters of sawn wood).

During the same periods, the United Kingdom's imports of sawn softwood from Canada dropped from 99,400 standards to 28,100 standards (down 71%). Her imports from the United States dropped from 36,900 standards to 5,200 standards (down 86%). Her total imports from all sources dropped from 193,600 standards to 153,200 standards (down 21%).

Besides country-by-country statistics on output, stocks and imports and exports of softwood, hardwood, pitprops and plywood, the Bulletin gives official data on trade in pulpwood and railway sleepers. It also contains a review of the European softwood situation during the first quarter of 1949, and timber market reports on thirteen European countries.

Situation Differs from Pre-war

According to the review, 'no simple parallels' can be drawn between the 1929-33 timber market situation and the situation of today, 'even if a major general recession should set in'. The comment arises from the general recession which developed in some countries during the later months of 1948 and the first quarter of 1949. This recession trend may have led some observers to recall

the days of the 1929/30 crisis, the review states. During that crisis 'a declining U.S.A. timber demand suddenly considerably increased Canadian timber exporting availabilities to Europe, and the resulting Canadian efforts to capture the European market... clashed with the equally determined efforts of the U.S.S.R.'.

The situation in 1949 differs from that of 1929-1930 because of the stronger control of the European governments over building activity, and because of the financial and currency policies of various governments 'which play a decisive part in shaping the European timber trade'.

In addition, the review stressed, 'the present volume of European timber trade is much lower than it was during the crisis years of the early 1930s; and it is not very probable that timber consumption will be reduced to any appreciable extent under the influence of a general recession'.

Explanation of Post-war Timber Famine

The review of the European softwood situation summarizes the reasons which brought about the timber famine of the immediate post-war period. 'The end of the war found most European countries with stocks practically exhausted and in urgent need of timber for the most essential rehabilitation purposes such as housing reconstruction, railway repairs, etc. During that period, timber was one of the most essential raw materials and was purchased even when this meant sacrificing other economic interests.

'By 1948, however, the most urgent needs had been covered, and to most importing countries timber had become one of the many raw materials which had to be purchased with scarce foreign exchange'. 'A limitation of effective demand resulted from the reversal of the economic trend in some European importing countries and the relatively low priority accorded new house building, the successful economy in timber and substitution of other materials for timber in important uses, as well as the lack of appropriate means of payment in international trade...'

Prices and Buyer Resistance

After a discussion of price trends, the review states: 'Countries with a de-controlled timber economy — including Italy, Belgium and Switzerland — experienced the phenomenon of growing resistance on the part of the consumer to current price-levels. Inflated post-war timber prices enabled substitute materials to under-cut timber in almost every field in which it was traditionally used. Steel, concrete and wall-boards in building construction; cartons in the packing industry; plywood in furniture manufacture; and even steel and concrete for railway sleepers, were substituted for timber on an increasing scale'.

* TIMBER STATISTIC, QUARTERLY BULLETIN, Vol. II, No 1, covering the periods January-March 1948 and 1949, is available from the authorized Sales Agents for United Nations publications (Geneva, September 1949, 124 pp. 2/6, \$ 0.50, 2 Swiss francs).

No 4 of Vol. III of the Forestry Division's publication *Unasylva* has just come out in French. Nos 2 and 3 were published in October and November last. Attention is called, in No 2, to the article by R. Zon on the fifteen-year conservation plan of the U.S.S.R. and to a study of the forest problems of Africa. No 3 contains the description of an interesting experiment in reforestation — airplane seeding, and a report of the work of FAO in the field of forestry. No 4 gives the text of the reports presented to the International Forestry Conference held in Mysore (India) and an article entitled 'Meeting Asia's timber needs'. Nos 5 and 6 are in the press.

The Fisheries Division has brought out Nos 5 and 6 of the *Fisheries Bulletin* (English edition).

These two numbers include short reviews of the activities of FAO's Fisheries Division and provide important statistical data on landings and the international fishery trade. Abstracts are also given on technological publications dealing with fishing, fish culture and canned products.

The *Report* of the First Session of the *International Rice Commission* held in Bangkok on 7-16 March 1949 is now available in printed form.

Chapters on Improvement of Rice Production, Rice Distribution and Utilization, Rice Statistics and Terminology, General and Financial Matters comprise its main contents. The foreword by H. S.H. Prince Sithiporn Kridakara, Chairman of the International Rice Commission, briefly outlines the background of the Commission and marks its creation as a significant step in the efforts of governments to bring about the systematic development and improvement of the rice economy of the world. Priorities of work and the procedure for carrying it forward have been decided on. Decisions on a number of basic questions of rice terminology and statistical reporting have likewise been settled.

The *First Supplement* to the *Classified Catalogue* has been published at the European Regional Office of FAO in Rome. The Supplement comprises 36 pages, consisting of a text and two indexes; one listing the subject matter (in English and French) and one listing the names of the authors. The *Second Supplement* to the *Classified Catalogue* of the Library of the former International Institute of Agriculture which was itself published in 1948 in Rome is in the press.

Further to the note published in the previous number of this Bulletin on the *Shantan Baillie School* (p. 218, English edition, p. 239, French

edition) we now advise our readers that the report has appeared in print. We give below in full in order to provide a picture of the School and its background the foreword of the report which contains 136 pages and is richly illustrated with useful photographs. Its cover, a coloured reproduction of a painting on cloth of a map of the School by some of the students symbolizes the creative, cooperative spirit of the undertaking.

Shantan is an ancient walled town on the old silk road near the Gobi desert. More than one thousand years ago it was a great city of perhaps a million people — the prize of contending armies. Arab caravans raised clouds of dust as they passed through the city gates on the first stage of their long journey home with valuable cargoes of silk, jade, and Chinese works of art. These were not the products of factories but of artist-craftsmen working in small-scale industries. The irrigated valleys were rich, and on the hills about were forests and flocks of sheep which provided a living for the people and brought wealth to the gentry and merchants.

The glory is now departed. Through the centuries the forests have been depleted and the hills eroded as population pressures forced their overexploitation. Set between the nomads of the steppes and the dense farming communities on the river-plains the countryside has been ravaged by successive wars and the city has been sacked many times. Irrigation works have been neglected. The artisans have joined their ancestors, no silk is sold on the markets, and the old silk road is closed.

Shantan is now a poverty-stricken village of some five thousand people the seat of a hsien or county, in which only thirty-seven thousand people eke out a miserable and precarious existence from the soil or from minor industries, using primitive equipment. But coal, clay, minerals and oil are in the hills, more and better crops could be grown on the lower lands if water were brought and more sheep could be pastured and more trees grown on the slopes.

But something else is needed if the inertia which goes with ignorance, poverty, disease, and undernourishment is to be overcome. Perhaps the Buddhas whose temple has been converted into a cotton-spinning mill are listening to the first sounds of a movement that may conquer the inertia and allow new opportunities to flower. Certainly the expression on the faces of the Buddhas must be somewhat puzzled as their benevolent gaze rests on strange machines and watches the boys of the Shantan School do old things in a quite untraditional way.

The movement in Shantan really began some six years ago when a foreigner visited the town. He had come further than the Arab merchants, but he had no merchandise to exchange, only an idea to plant among the crumbling temples. The

idea was born out of his experiences of the successes and failures of the Chinese industrial cooperatives, and out of a deep conviction that small-scale industries associated with improvements in agriculture could make an important contribution toward improving the lot of the Chinese people. The stranger, Rewi Alley, planned to establish a school to train cooperative leaders for rural communities, but it was to be a new kind of school with objectives and methods different from those traditional in the West, whence he came, or in China. For such a school the location must be carefully selected. Shantan was chosen, and the first boys trekked two thousand kilometres, dragging treasured machines in mule carts and wheelbarrows, and established themselves in the remote Kansu village with the temperature twenty below zero.

This is a description of the Shantan Bailie School which Alley established. It has been selected for a study as a significant experiment in training for rural leadership. No development in rural welfare can be exactly duplicated. The problems requiring attention, the social environments out of which they arise, the personnel and resources available differ from country to country and even from region to region within the same country. Nevertheless, what has been achieved in one place may provide stimulus and guidance in others which have broadly similar problems and are at the same stage of development.

It is hoped that the study of the Shantan Bailie School will provide such stimulus and suggest some lines of approach to the training of rural leaders, especially in the cooperative movement in economically less developed areas; and, even more, that those concerned with such training may be impelled to visit the school and consider for themselves which of its experiences and methods can be of use to them in their own work.

The school was established by a group who played a prominent part in the development of the indus-

trial cooperative movement. Having shared the pride in the conspicuous achievements of the cooperatives during the war, and suffered the bitter disappointment of their subsequent collapse, they recognized the need for rebuilding the movement on solid educational foundations.

The objective of the school's founders was to train leaders for industrial cooperatives in the villages, leaders who would provide guidance and give coherence to an integrated movement. These leaders were to be technicians who could operate small industrial plants. The school would experiment with small industries suitable for villages and give training in improved agricultural practices; for in the rural communities agriculture and small-scale industry should be closely related pursuits. The boys would live and work together in practical activities directed to meeting their own needs and the needs of their people. So the creative potentialities of peasant boys would be released. The experiences of the school would provide inspiration and guidance for the establishment of similar schools in other areas.

This report describes the methods tried to achieve these objectives and raises the sort of questions which must be answered by those who would develop such a project elsewhere for the training of rural leaders.

The greater part of this work was done by Dr Yang Hsin-Pao of the Rural Welfare Division of FAO, who lived for some time at the school in the fall of 1948. The study would not have been possible, however, without the generous cooperation of Rewi Alley, Headmaster of the Shantan School; Miss Ida Pruitt, executive secretary of INDUSCO, and other officers of this organization; the Association for the Advancement of Chinese Industrial Cooperatives; and the International Committee for Chinese Industrial Cooperatives, who have placed all available information freely at the disposal of FAO. Illustrations for this book were furnished by courtesy of INDUSCO, Inc.

FILM NEWS FROM MEMBER COUNTRIES

A list of Dutch films

De bonte moet cruit (Off with that cow).

Sound film 35 mm., length 918 metres, time 31 min.

Sound film 16 mm., length 368 metres, time 31 min.

A documentary film, produced on behalf of the Veterinary Service as propaganda for the control of tuberculosis in cattle. It gives the history of the child of a cattle farmer who is infected by a cow suffering from open tuberculosis and who eventually dies. The film gives numerous details on the

dangers and the great financial loss which tuberculosis in cattle has already caused, demonstrates the important results which have been attained through voluntary measures and shows the measures which are required for adequate control.

Mond - en Klawwzeer film (Foot-and - Mouth Disease film).

Sound film 35 mm., time 15 min.

Sound film 16 mm.,

Propaganda film to stimulate the stockfarmers to have their animals immunized against foot-and-mouth disease with the new serum of the Institute for Foot-and-Mouth Disease at Amsterdam. The

film shows the various clinical pictures and the catastrophical damage which is caused by an epidemic of this feared disease, and also the preparation of the new serum and the manner in which the cattle can be efficiently protected from foot-and-mouth disease.

Boeren vechten voor hun toekomst (Farmers fight for the future).

Sound film 35 mm., length 892 metres, time about 30 min.

Sound film 16 mm., length 356 metres, time about 30 min.

A documentary film on the war damage in the Netherlands agrarian districts. A reminder of the desperate plight in which the country was in 1945 and after the liberation and the enormous task that lay ahead. The bombing of the dikes and the inundation of Walcheren. Destruction and confusion in the Betuwe. Land-mines, housing, the senseless destruction in the Wieringermeer etc. Here is also shown what has been achieved since them.

Farmers fight for the future.

Sound film 35 mm., length 892 metres, time about 30 min.

Sound film 16 mm., length 356 metres, time about 30 min.

A version in the English language of the film 'Farmers fight for the future'.

De grond wordt weer goed (The soil will be good again).

Sound film 35 mm., length 1,190 metres, time about 40 min.

Sound film 16 mm., length 476 metres, time about 40 min.

An instructive film on the recovery of the ground in the areas which were inundated with salt water. The wonder of Tholen. Instructions on treatment of the soil and application of gypsum. Advice on the crops to be grown. Data on the structure of the soil and the vegetation. The importance of adequate drainage. The influence of rain and sun. A very interesting film, even for farmers in other districts.

Vruchtdrage Arbeid (Labour that pays).

Sound film 35 mm., length 525 metres, time 18 min.

Sound film 16 mm., length 210 metres, time 18 min.

A film on the care which is bestowed in the Netherlands on the cultivation of apples and pears. A complete survey from planting in the ground until picking, with interesting pictures about the various grafting-methods and the old and modern ways of gathering. The diseases and their control are also dealt with. Further attention is paid to scientific research on the keeping of fruit. Finally are shown the sale by auction, packing, and processing. A film with a cultural tendency, suitable for any public.

Ratten (Rats).

Sound film 35 mm., length 381 metres, time 13 min.

Sound film 16 mm., length 156 metres, time 13 min.

Propaganda film to promote the combating of rats and mice. The film gives figures of the damage caused by rats in our country (more than Dfl. 30 million per year). You see the characteristic differences between the black, the brown and the black water rat. The common mouse and the field-mouse. The natural enemies of the rat. Hints on the various rodenticides and the application of poison. The importance of regional rodent control. An interesting film with several sensational pictures.

Moeder's Verjaardag (Mother's Birthday).

Sound film, 16 mm., length 123 metres, time 10 min.

This film originated in wartime and was made to popularize allotment gardens in order to alleviate the shortage of food. The film is good and is still in great demand with associations of allotment gardeners.

Morgen komt Mummelmans (Mr Nibbler is coming to-morrow).

Sound film 16 mm., length 120 metres, time 9 min.

This film was produced during the war and was intended to promote the keeping of rabbits in view of the shortage of food. A film which is still in demand.

Operatie Tienstreep (Operation Tenstripes).

Sound film 35 mm., length 315 metres, time 11 min.

Sound film 16 mm., length 126 metres, time 11 min.

This film shows how the Netherlands fights the Colorado beetle. You see the organization of this control by the Phytopathological Service at Wageningen together with the means at its disposal from primitive instruments to flame-throwers. The voracity of this beetle is formidable. The allotment gardeners also aid in the control. It is clearly shown that the Colorado beetle threatens the Dutch foreign exchange position and that the Netherlands cannot relax her vigilance. A very interesting film with many clear pictures of the beetle, its larvae and its eggs, which is certainly worth seeing, and clearly shows how intensively the fighting in the Netherlands is done.

Operation Ten-stripes.

Sound film 35 mm., length 315 metres, time 11 min.

Sound film 16 mm., length 126 metres, time 11 min.

The film 'Operatie Tienstreep', however with English text.

Hengstenkeuring (Inspection of stallions).

Silent film 16 mm., length 300 metres, time 25 min.

A report of the test performances of harness horses held at Assen, Leeuwarden and Groningen in 1943.

Het Texelse Schaap (The Texel Sheep).

Sound film 35 mm., time 15 min.

Sound 16 mm., time 15 min.

A great many sheep-farmers are not acquainted with the management of specific sheepbreeding farms. The film gives a clear picture of this. The famous qualities of the Texel Sheep are clearly demonstrated, so that the film may very well be used to promote their sale abroad.

The Texel Sheep.

Sound film 35 mm., time 15 min.

Sound film 16 mm., time 15 min.

English version of the film 'Het Texelse Schaap'

Ons Pluimvee (Our poultry).

Sound film 16 mm., time 50 min.

This instructional film gives a complete idea of poultry breeding in the Netherlands together with the methods employed. Scientific research is also dealt with. The film consists of three parts. Part I gives a survey of all Dutch fowl breeds. Part II deals extensively with breeding. Part III concerns housing, feeding and care of the poultry. A very interesting film with many practical hints.

Walvis in zicht (There she blows).

Sound film 16 mm., length 880 metres, time 71 min.

This film gives a report of the first voyage, in 1947, of the Dutch whaling-boat the 'Willem Barendsz'. It gives an idea of life on board of this floating whale-oil factory. The work of the catchers. The processing of the caught whale. Many interesting pictures of the voyage; Birds' Island, the floating icebergs, etc. This film is not intended for general circulation.

De Nederlandsche Pootaardappel (The Dutch Seed Potato).

Sound film 35 mm., time 15 min.

Sound film 16 mm., time 15 min.

A film for the propaganda of the Dutch seed-potato. A complete survey of the whole cultivation cycle; the tillage of the soil, planting, growth, selection and exportation. Produced by order of the Seed Potato Export Publicity Commee.

The Dutch Seed Potato.

Sound film 35 mm., time 15 min.

Sound film 16 mm., time 15 min.

English version of the film 'De Nederlandse Pootaardappel'.

Le plant de pomme de terre néerlandais.

Sound film 35 mm., time 15 min.

Sound film 16 mm., time 15 min.

French version of the film 'De Nederlandse Pootaardappel'.

CONFERENCES

CONGRESSES - MEETINGS

1 9 5 0

General Assembly of the European Confederation of Agriculture

During the discussions of the General Assembly of the European Confederation of Agriculture which took place in Innsbruck from 29 September to 1 October, the principles of State control of agriculture and the introduction of State managed village cooperatives were flatly rejected.

The Assembly gave its attention to various problems of agricultural and economic policy and examined, inter alia, the progress achieved in the control of bovine tuberculosis in order to eliminate a dangerous source of infection for man. Reports were presented on this subject by Mr Christiansen, Veterinary Inspector (Denmark) and by Prof. Flückiger (Switzerland).

A debate was held on the reports of Mr Robin (France) and Mr Horber (Switzerland) on the use of new chemical means in the control of cockchafer, their larvae and wireworms. Preliminary results indicate that the losses caused by these parasites might be appreciably reduced.

It was decided that the next Assembly be held at Strasburg in 1950 and that the main points on the agenda would be the attitude to be adopted by the farmers in regard to the economic collaboration of the European States, and the means of safeguarding the interests of agriculture. The proposals of the ILO concerning salaries, holidays with pay and hours of work in agriculture will also be examined and discussed.

Conferences

JANUARY

3 - 14

Paris, Meeting OEEC-ECA.

5

Paris, Meeting of OEEC Working Party on Agricultural Technology.

12 - 14

Geneva, Meeting FAO-ECE.

24 - 28

Florence, International Colorado Beetle Conference.

31 - 3 FEBRUARY

Rome, Meeting of experts on the extension of hybrid maize.

JANUARY - FEBRUARY

Rangoon, Committee of Nutrition Workers from countries in East Asia (FAO).

New Delhi or *Nairobi*, Meeting on Problems of Livestock Improvement, including breeding under tropical and sub-tropical conditions (FAO).

FEBRUARY

1 - 3

Rangoon, Meeting on Plant breeding programs relating to rice and other crops (Preceding meeting of International Rice Commission (FAO).

6 - 15

Rangoon, Second Session, International Rice Commission (FAO).

7 - 9

Rome, Meeting of experts for the study of legislative measures relative to artificial insemination.

MARCH

27 - 30

Geneva, Meeting of Agricultural Technology Committee.

20 - 25

Geneva, Meeting of ECE Committee on Agricultural Problems.

APRIL

Cyprus, Improvement of semi-arid grazing lands, soil conservation, forestry practices and related matters in Near East (will include certain European countries having similar problems) (FAO).

24 - 1 MAY

Netherlands, International meeting on plant quarantine measures.

Australia, Indo-Pacific Fisheries Council (FAO)

MAY

Washington, Congress of International Seed Testing Association.

2nd Week

Rome, FAO Council

JUNE

Rio de Janeiro, Nutrition Conference (FAO).

JULY

London or *Copenhagen*, Fisheries Statistics Meeting (FAO).

AUGUST

Ceylon, Land utilization in tropical and sub-tropical countries (FAO).

SEPTEMBER

Rome, Inaugural meeting to establish General Mediterranean Fisheries Council (FAO).

OCTOBER - NOVEMBER

Pre-Conference Meetings in the various Regions (FAO).

Congresses

JULY

12 - 20

Stockholm, 7th International Botanical Congress
Brussels, 8th International Congress of Agricultural Industries.

24 - AUGUST 1

Amsterdam, 4th International Congress of Soil Science.

AUGUST

24 - SEPTEMBER 2

Athens, International Conference on Viticulture and Wine.

Fairs and Exhibitions

FEBRUARY

12 - 19

Brussels, International Show of Machinery and Products for Agriculture

25 - 13 MARCH

Nice, International Fair

28 - MARCH 5

Paris, XXIst International Agricultural Machinery Show.

28 - 5

Paris, 32nd Agricultural Exhibition and 21st Honey Fair.

MARCH

6 - 13

Leipzig, International Fair.

12 - 14

Cologne, International Spring Fair

12 - 20

Verona, International Agricultural and Horse Fair.

12 - 20

Vienna, International Spring Fair.

12 - 30

Milan, International Fair.

17 - 26

Copenhagen, International Fair.

19 - 24

Prague, International Fair.

19 - 24

Frankfort, International Fair.

21 - 30

Utrecht, Royal International Netherlands Fair.

29 - APRIL 2

Hanover, German Fair of Consumer Goods.

APRIL

13 - 30

Milan, International Fair.

15 - 24

Lyons, International Fair.

15 - 25

Basle, 34th Samples Fair.

28 - 20 MAY

Lille, International Textile Exhibition

29 - MAY 14

Brussels, International Fair.

29 - MAY 14

Poznan, International Fair.

LEGISLATIVE NEWS

SUMMARY : I. FOODSTUFFS : Colouring and aromatization of foodstuffs (France). — **II. AGRICULTURE :** (a) Catalogue of crop species and varieties (France); (b) Fruit crops (Switzerland); (c) Oil crops (Switzerland); (d) Potatoes (Switzerland); (e) Grapes (Switzerland); (f) Phytosanitary control and animal pests (Belgium, France, Luxembourg); (g) Peasant holdings and farm contracts (Italy); (h) Agricultural credit (France); (i) Stockbreeding (Belgium, France, Morocco, U.S.S.R.); (j) Livestock sanitary police regulations (Belgium, France, Switzerland). — **III. ECONOMIC AFFAIRS AND MARKETS :** (a) Multipartite agreements — International Wheat Agreement (Belgium, Italy); (b) Commercial treaties, economic agreements, etc. (Italy-France, Italy-Turkey, Italy-Belgo-Luxembourg Union); (c) Foreign trade (France, Portugal, Switzerland); (d) Conditioning and technical inspection of export commodities — (i) *groundnuts* (France); (ii) *cinchona bark* (France); (iii) *broad beans and horse beans* (Algeria); (iv) *lentils* (Algeria); (v) *honey* (Madagascar); (vi) *peaches* (France); (vii) *vanilla* (Madagascar); (e) Olives and olive oil (France); (f) Wines (Luxembourg); (g) Price control and fixing — (i) *coffee* (Belgium, Madagascar); (ii) *cereals* (France, Morocco); (iii) *Oilseeds* (France); (iv) *milk* (France); (h) Livestock and animal products (France); (i) *Butter* (Belgium, Luxembourg); (j) Milk and dairy products (Belgium, Luxembourg). — **IV. FISHERY** (France). — **V. RURAL WELFARE :** (a) Family allowances (France, Switzerland); (b) Cooperation (France); (c) Housing (Belgium).

I. - FOODSTUFFS

Colouring and aromatization of foodstuffs

FRANCE

■ An Order of 1 July 1949 (*J.O.*, N° 168, 17 July 1949, p. 6971) authorizes the use of wood distillation products for the colouring and aromatization of foodstuffs. The products employed must be derived exclusively from pyroligneous acid obtained from broadleaved wood, and not from conifers. These products should be free from toxic substances and, in particular, from methanol, acetone, formol, creosote and acetaldehyde, and should comply with other conditions stipulated by the Order.

The labelling of the foodstuffs thus coloured or aromatized shall include the following phrase: 'goût fumé ou arôme fumé'.

II. - AGRICULTURE

(a) Catalogue of crop species and varieties

FRANCE

■ An Order of 9 July 1949 (*J. O.*, N° 172, 22 July 1949, p. 7202) adds to the Catalogue of species and varieties, set up by Order of 16 November 1932, a section for 'seed flax' including the following varieties: 'Concurrent', 'Formosa', 'Hollandia', 'Liral Crown', 'Liral Dominion', 'Liral Monarch', 'Liral Prince', 'Percello', 'Rembrandt', 'Stormont Gossamer'.

In designating a variety of seed flax, the use of

a denomination other than that under which it is registered in the catalogue is prohibited. Consequently, new varieties, imported or otherwise, cannot be sold as seed flax until they have been registered in the aforesaid catalogue.

(b) Fruit crops

SWITZERLAND

■ A Federal Order of 19 August 1949 (*R.L.F.*, N° 33, 25 August 1949, p. 1162) authorizes the Excise Office for Spirituous Liquors to take measures regarding the utilization of the 1949 crop of pomaceous fruit. In order that the crop may be utilized as far as possible without recourse to distillation, the Excise Office is authorized to encourage the processing of the excess fruit into easily conservable preparations; to promote the provisioning of persons short of fresh fruit and fruit products; to facilitate the use of new methods for the utilization of fruit and fruit waste.

To attain these objectives the Excise Office may grant subsidies, limit distillation, control quality in domestic trade, encourage the use of table fruit, etc.

An Order of the Federal Council dated 18 October 1949 (*R.L.F.*, N° 40, 20 October 1949, p. 1579) authorizes the Excise Office for Spirituous Liquors, during the 1949-50 fiscal year, to take measures to adapt orchards for the production of table fruit and good cider fruit. In order to rationalize fruit-growing and to adapt production to market possi-

bilities, the Excise Office in particular advocates tree care and improvement work in orchards, double grafting, expert instruction, lectures, information service, etc.

The expenses entailed by these measures will be reimbursed to the cantonal arboriculture stations. The subsidies for double grafting amount to a maximum of 50 per cent. of the expense effected. A subsidy of 20 francs at the most may be allocated for each sound cider pear-tree felled while in full production.

The aforesaid subsidies shall only be granted to enterprises which do not increase the number of their trees (pomaceous fruit-trees) and which endeavour to adapt their orchards, especially as regards the number of cider pear-trees, to market requirements.

(c) Oil crops

SWITZERLAND

■ An Order of the Federal Council dated 12 July 1949 (*R.L.F.*, N° 28, 14 July 1949, p. 808) confirms the Federal guarantee covering the 1950 colza crop, provided that the growers take back, in proportion to their deliveries, the oil mill waste (oilcake and crushing waste). After having consulted the cantonal authorities the Department of Public Economy will assign the areas to be cultivated. The production price will be fixed by the Federal Council before the crop is harvested, taking into account production costs, yield and possibilities of utilization. Other measures are contemplated for regulating purchase at the production centres, processing by the oil mills, and the utilization of colza oil and waste products.

(d) Potatoes

SWITZERLAND

■ An Order of the Federal Council dated 6 September 1949 (*R.L.F.*, N° 35, 15 September 1949, p. 1408) authorizes the Excise Office for Spirituous Liquors to take the requisite measures regarding the purchase, storage and use of potatoes and their products, and also to give the necessary instructions relative to the utilization of the home crop without distillation. In particular, the Excise Office is authorized to allocate subsidies for the transport of potatoes within the country; to promote the sale of table potatoes; and to regulate the use of potatoes for foddering and industrial purposes.

Other provisions refer to the fixing of production price, delivery, collaboration of the associations concerned, expenditure and each of regulations.

(e) Grapes

SWITZERLAND

■ An Order of the Federal Council dated 6 September 1949 (*R.L.F.*, N° 35, 15 September 1949, p. 1410)

provides measures to ensure the utilization (non-alcoholic) of part of the crop of home-grown grapes.

The Department of Public Economy is charged with organizing the sale of table grapes, the preparation of supplementary quantities of grape-juice, and the concentration of musts.

Half the expenses entailed in the aforesaid operations will be covered by the Wine-growing Compensation Fund which forms part of the Fund for the protection of Swiss wine production and for the sale of national wines. Beginning 8 September 1949 and up to the enforcement of the future Wine Statute, at the latest, however, by 31 December 1950, wine importers are required to pay in to the Compensation Fund a tax of 6 francs per quintal of wine imported.

(f) Phytosanitary control and animal pests

BELGIUM

■ An Order of 5 September 1949 (*M.B.*, Nos 262-263, 19 and 20 September 1949, p. 8911) indicates the measures to be taken to prevent the spread of the potato eel worm (*Heterodera rostochiensis*). Potato-growing is prohibited in the areas infested by this pest. The duration of interdiction and the delimitation of the zones declared infested are decided by the Minister of Agriculture and notified to the parties concerned through the burgomaster. Preventive and curative measures are also decided by the Minister of Agriculture.

With a view to standardizing the official measures to be taken in regard to the control of plant and animal pests, an Order of 1 October 1949 (*M.B.*, N° 286, 13 October 1949, p. 9586) substitutes for the provisions scattered in eleven decrees, a standard regulation which gives the burgomaster the sole right to carry out officially the measures passed for the destruction of plant cryptogamous, insect and animal pests in the territory of this commune, whenever the proprietors, tenants or holders do not comply with instructions. The expense entailed by official destructive operations will be recuperated by the commune through indirect communal taxes.

FRANCE

■ An Order of 15 July 1949 (*J.O.*, N° 174, 24 July 1949, p. 7275) authorizes the use of nuxvomica, strychnine and strychnine salts solely for the preparation of poison bait for destroying the following vertebrates: (a) rodents, especially rats, mice, field mice and meadow mice; (b) depredatory birds, in particular: crows and magpies; (c) small carnivora, in particular: foxes, badgers, stone-martens, martens, wild cats, polecats.

The use of these poisons is authorized at all times but, in order to prevent or check dangerous pullulation, collective control of these ravagers should

be organized by prefectural orders, fixing time of control operations, the means to be employed and the safety measures to be taken.

An Order of 1 August 1949 (*J.O.*, N° 188, 10 August 1949, p. 7921) supplements List A appended to the Order of 1 August 1946, relative to the control of animal and plant parasites of crops by the addition of the potato nematode *Heterodera rostochiensis* Woll.

LUXEMBOURG

■ By Grand Ducal Decree of 23 September 1949 (*M.L.*, N° 43, 14 October 1949, p. 971), modifying and supplementing Law of 15 March 1892 relative to the destruction of insects and plants injurious to crops, the Minister of Agriculture is authorized to prescribe the necessary measures to check or prevent the damage caused in agriculture and horticulture by noxious animals, insects and plants, when the said damage occurs in one or several communes and assumes or may assume an invasive or calamitous nature.

A Ministerial Order of 24 September 1949 (*Ibid.*, p. 971), in application of the aforesaid Grand Ducal Decree, declares the entire territory of the country infested by field voles and meadow mice. In consequence, and until decision to the contrary, the communal administrations, communities and private individuals are obliged to take special measures for their destruction. Destruction will be effected solely by means of grain bait poisoned with zinc phosphide. All proprietors, lessees, tenants or occupiers, in any capacity whatsoever, of land cultivated or otherwise, are obliged to ensure the destruction of the rodents in question at their expense, at the dates specified by the burgomaster and municipal magistrates. It is incumbent on communities, administrations and enterprises, both public and private to take the same measures. In the event of the said measures not being carried out, the burgomaster and municipal magistrates, after summoning the defaulters, will effect the official treatment, costs to be borne by the defaulters.

When the poison bait is being set out, it is prohibited to allow domestic animals to graze or stray on the land treated. This interdiction also applies, during eight days following treatment, to pigs and all species of poultry.

(g) Peasant holdings and farm contracts

ITALY

■ Law N° 473 of 29 July 1949 (*G.U.*, N° 179, 6 August 1949, p. 2123) carries supplementary provisions to Legislative Decree N° 114 of 24 February 1948 containing measures in favour of the small peasant holding (see this *Bulletin*, 1948, N° 6, p. 514). The National Office for the three Venetia, settlement organizations, land reclamation consortia and

other public enterprises shall enjoy the fiscal facilities granted in the purchase, development and sale of land intended to be divided into peasant holdings, for the benefit of personal operators or cooperatives of same. In these transactions the Ministry of Agriculture and Forests may grant State assistance in the payment of interest if payment of the purchase price of the land is spread out over a certain period.

Law N° 476 of 3 August 1949 (*G.U.*, N° 179, 6 August 1949, p. 2125) extends for the 1948-49 crop year the provisions governing the renting of farm land. The reduction in farm rent to the extent of 30 per cent. is applicable in the same cases as in the 1947-48 crop year, even if the obligation to stock the produce to which the farm rent refers has ceased.

Law N° 533 dated 15 August 1949 (*G.U.*, N° 192, 23 August 1949, p. 2245) lays down that personal employment contracts between agricultural employers and employees paid a fixed wage, under any designation whatsoever, shall not cover a period of less than two crop years. Any agreement made contrary to this stipulation is null and void. Any contracts which expire at the end of the 1948-49 crop year are extended by law up to the end of the 1949-50 crop year.

A new Law N° 789 of 29 October 1949 (*G.U.*, N° 252, 2 November 1949, p. 3002) carries rules interpreting Article 8 of Act N° 353 dated 25 June 1949 (see this *Bulletin*, 1949, N° 3, p. 229). The text of Art. 8 is substituted by another which extends over the whole of the 1949-50 crop year grants of uncultivated or insufficiently cultivated land, made by virtue of Legislative Decree N° 279 of 19 October 1944 and Legislative Decree N° 89 of 6 September 1946 and subsequent amendments.

(h) Agricultural credit

FRANCE

■ Act N° 49-967 of 20 July 1949 (*J.O.*, N° 171, 21 July 1949, p. 7167) increases from 3 milliard to 4 milliard francs the maximum amount of money the Minister of Finance permits the National Agricultural Credit Bank to advance for the granting of individual long-term loans. In addition the account for loans and agricultural or rural interest guarantees (long-term agricultural loans) is raised from 5,500 million to 6,500 million francs.

(i) Stockbreeding

BELGIUM

■ An Order of 5 September 1949 (*M.B.*, N° 262-263, 19 and 20 September 1949, p. 8910) amends and supplements Order of 30 June 1948 fixing the subsidies which may be granted for the purpose of promoting the rational application of artificial insemination for cattle. In consequence of this

amendment, when, in a province, the cows and heifers number more than 100,000, the anticipated amounts of 300,000 francs may be increased by 20,000 francs per lot of 5,000 head in excess of this number, although, however, none of these subsidies shall exceed the amount of 600,000 francs.

FRANCE

■ An Order dated 22 October 1949 (*J.O.*, N° 256, 29 October 1949, p. 1080) lays down the conditions governing the duty-free importation of pedigree horses, cattle, sheep and pigs for breeding purposes. All stockbreeding associations or similar organizations desiring to import pedigree breeding animals free of duty, will be required to draw up, in four copies, an application for licence conformable to the specimen application appended to the Order. The application will have to be submitted for approval either to the Department of Agricultural Services or to the Stud Office of the district in which are located the farms where the breeding stock is to be utilized. After examination by one of these bodies, the application will be sent for decision to the Ministry of Agriculture, at least fifteen days before date of arrival at the customs of the animals. Subsequent notices published by the Ministry of Agriculture shall indicate the technical conditions on which the favourable decision of the Ministry of Agriculture depends.

MOROCCO

■ An Order dated 15 June 1949 (*B.O.M.*, N° 1915, 8 July 1949, p. 831) fixes for the fiscal year the terms and conditions relative to the assigning to importers of certain breeding animals of the bonus instituted by Vizierial Order of 15 June 1935, amended by Vizierial Order of 6 March 1949 (see this *Bulletin*, 1949, N° 3, p. 230).

By virtue of the new Order, the bonus shall only be granted for the importation of stallions, jackasses, bulls, rams, he-goats and boars preliminarily approved by the Chief of the Animal Husbandry Division. For the year 1949 the bonus is fixed at 20 per cent. *ad valorem*.

The estimated value of the animals is indicated on the customs clearance receipt. The bonus, however, will only be due, for each animal, for a value not exceeding 200,000 francs for stallions and jackasses, 80,000 francs for bulls, 30,000 francs for rams, he-goats and boars.

U. S. S. R.

■ A Decree, dated 18 April 1949, of the State Council of the U.S.S.R. and the Central Committee of the Pan-Russian (Bolshevik) Communist Party (*Sobranie Postanovlenii i Rasporiiaenii Soveta Ministrov SSSR*, N° 8 July 1949, p. 146) approves a very detailed 3-year plan for the development of socialized livestock production in the kolkhozy

(collective farms) and in the sovkhozy (Government farms).

In regard to the kolkhozy, it is ruled that the Party and Soviet organizations of the regions, territories and republics of the Union, as well as the Ministry of Agriculture of the U.S.S.R. and its local services are required to promote the increase in number of livestock and in animal products in the kolkhozy, so that by 1951 the total socialized livestock production, together with that of the sovkhozy, may amount to one and a half times that of 1948. This expansion program also covers the production of meat, bacon, milk, butter, eggs and other animal products to provide the food supplies of the towns, industrial centres and, in general, of the population of the country, as well as the production of hides and leathers, wool and other raw materials for light industry.

Each kolkhoz during 1949 will be required to organize at least 4 specialized sections ('fermy') for raising cattle, sheep, pigs and poultry. Exceptions will be made, mainly in regard to pig-breeding in areas with a Moslem population, and poultry rearing in the zones where no cereals are grown.

It is recognized necessary to revise the minimum number of livestock at present in the specialized livestock farms, taking into account the extent of its increase in all the territories, regions and republics in relation to the increase in area cultivated by the kolkhozy.

Beginning in 1950 compulsory delivery of animal products to the State will be reduced by 10 per cent. for kolkhozy possessing 4 livestock sections but, on the other hand, the proportion will be increased by 10 per cent. in the kolkhozy which have not organized the four prescribed livestock sections.

Regarding the increase in number of cattle, it is laid down that the number of head of cattle in the kolkhozy must attain the following totals: at the end of 1949, at least 24 million, this figure not to include the 30 million head owned by individuals (19.1 million head by the collective farm members; 7 million head by the workers and employees; 3.9 million by the individual peasant holdings), and also not counting the number of cattle in the sovkhozy; at the end of 1950, at least 28 million; at the end of 1951, at least 34 million, always excepting the number of stock existing at the same dates, belonging to individuals and sovkhozy, as specified above.

In order to ensure the execution of the program in this sector, the Party and Soviet organizations of the zones, regions, territories and republics of the Union, as well as the Ministry of Agriculture of the U.S.S.R. and its local departments are required to adopt measures, particularly with a view to combatting sterility in cows, to prevent loss in livestock through epizootic diseases, etc.

The plan contemplates increase in dairy production in the kolkhozy, by establishing that in 1951 the average milk yield per cow should not be less than

1,700 to 2,000 kg. per year; in kolkhozy raising dual-purpose cattle (beef and milk), the milk yield per cow should average at least 800-1000 kg. per year. To this end, measures are envisaged aiming at more rational upkeep methods and more appropriate feeding. Further measures are being adopted regarding increase in production and improvement in the quality of meat.

In respect of increase in numbers of sheep and goats, the plan lays down that at the end of 1949, the kolkhozy should possess at least 62.4 million head, including 55 million head of sheep, but not counting 26.5 million head of sheep and goats at present owned by individuals (18.5 million head owned by kolkhoz members, 5.2 million by workers and employees, and 2.8 million belonging to individual peasant holdings), and also excluding the number of head belonging to the sovkhosy; at the end of 1950, at least 73 million head, including 65 million sheep; at the end of 1951, at least 88 million head, including 80 million sheep, these figures not to include the numbers possessed at these dates by kolkhoz members, workers and employees, peasant holdings and sovkhosy. Special measures are contemplated particularly in regard to breeding of sheep producing good quality wool.

For pig-breeding in the kolkhozy, the plan establishes that, by the end of 1949, the kolkhozy should possess at least 10 million head, not counting the 7.2 million pigs at present owned privately (3.7 million belonging to kolkhoz members, 1.6 million to workers and employees and 1.9 million individual peasant holdings), and not including the number of pigs belonging to the sovkhosy. At the end of 1950, there should be at least 13 million head; at the end of 1951, at least 18 million, not including in these figures the number possessed at the same dates by the kolkhoz members, workers and employees; peasant holdings and sovkhosy.

In the poultry-breeding sector the plan lays down that all kolkhozy growing grain crops are required to raise poultry. At the end of 1949, the number of poultry is expected to amount to at least 65 million, apart from the 350 million at present owned by kolkhoz members, workers and employees and individual peasant holdings, and the number owned by the sovkhosy. At the end of 1950, numbers should attain at least 120 million head and at the end of 1951, at least 200 million, always excluding the number possessed by kolkhoz members and the sovkhosy.

Special measures are contemplated for the construction of hen-houses, the use of incubators, raising of selected breeds, etc.

A large number of provisions regards the increase and improvement of forage crops and pastures, rational stockfeeding, mechanization of stockbreeding, building of silos, milking machinery, stabling, etc.

Another series of provisions concerns the develop-

ment of stockbreeding in the sovkhosy, scientific research in animal husbandry and the improvement of zootechnical and veterinary services.

For this purpose measures have been decreed regarding the technical training of specialized personnel and the assignment of prizes or bonuses and other awards to everyone who renders special services towards the achievement of the three-year livestock plan.

(j) Livestock sanitary police regulations

BELGIUM

■ Ministerial Order of 24 August 1949 (*M.B.*, N° 239, 27 August 1949, p. 8253) prohibits entry into Belgium of slaughter ruminants originating from France. Infractions are inquired into, verified, proceeded against and punished in conformity with Articles 3, 5 and 7 of 30 December 1882 on the sanitary police regulations concerning domestic animals and insect pests, modified by Act of 20 December 1897 relative to the repression of fraud in the import, export and transit of prohibited merchandise.

In Order to protect Belgium stock, still free from contamination, by special measures to be employed at the frontier, rendered necessary following the alarming spread of fowl plague and pseudo-fowl plague in many countries of the European continent, a Ministerial Order of 20 September 1949 (*M.B.*, N° 272, 29 September 1949, p. 9222) regulates the importation of live poultry into Belgium.

Importation is only authorized from countries free from fowl plague or pseudo-fowl plague for the last six months at least. All imports are to be accompanied by a certificate delivered by the competent authority of the country of origin, testifying that the country has been free from fowl plague and pseudo-fowl plague since six months.

FRANCE

■ In consequence of the presence of rinderpest in the Mediterranean Basin, an Order of 31 August 1949 (*J.O.*, N° 214, 10 September 1949, p. 9180) prohibits the importation into and transit through France of all live ruminants or pigs, domestic or wild, from all countries. The same interdiction applies to fresh meat, raw hides, from the same animals, greasy wool, horsehair, horns and ergots from Asia and Africa.

SWITZERLAND

■ Order of 29 July 1949 (*R.L.F.*, N° 32, 18 August 1949, p. 1150) supersedes and amends Art. 32 of the enforcement Ordinance, dated 30 August 1920, of the Federal Act on the measures to be taken to control epizootic diseases. In pursuance of this amendment, the Confederation refunds to the cantons half the cost of the treatment or the indemnity of the cantonal veterinarian.

III. - ECONOMIC AFFAIRS AND MARKETS

(a) Multipartite agreements : The International Wheat Agreement

BELGIUM

■ The Act of 2 June 1949 (*M.B.*, N° 212; 31 July 1949, p. 7352) ratifies the International Wheat Agreement, signed in Washington on 23 March 1949.

ITALY

■ Act N° 689 of July 1949 (Suppl. to *G.U.*, N° 229, 5 October 1949, p. 2) authorizes the acceptance and enforcement of the International Wheat Agreement signed in Washington on 23 March 1949.

(b) Commercial treaties, economic agreements, etc.

ITALY : FRANCE

■ Act N° 766 of 18 July 1949 (*G.U.*, N° 250, 29 October 1949, p. 2970) ratifies and enforces the Italian-French agreement relative to the protection of name-brands and of the names of certain products, drawn up in Rome on 29 May 1948.

Under the terms of this Agreement, each country is pledged to take all the necessary measures to guarantee effectively the natural or manufactured products originating in the other country against unfair competition in commercial transactions. Each of the two contracting countries undertakes, in particular, to repress and prohibit the manufacture, circulation, importation, storing, sale or offering for sale on the domestic or export markets of all products bearing on themselves or on their direct conditioning or on their outside wrapping, on the invoices, way-bills and trade documents, brand marks, names, directions, illustrations containing directly or indirectly false particulars on the origin, sort, nature or specific qualities of these products or merchandise.

French products protected in Italy include champagne and a large number of other wines as well as many brandies and certain cheeses, Dijon black-current liqueur, Puy green lentils, Grenoble walnuts, Chambéry vermouth, Bresse poultry.

Among the Italian name-brand products which will be protected in France are a large number of wines, cheeses, pig-meats, citrus and other fruits, essential oils, cakes.

ITALY : TURKEY

■ Decree N° 578 of 19 May 1949 (*G.U.*, N° 199, 31 August 1949, p. 2363) ratifies the trade and payments agreements, the Notes exchanged and Protocol of Signature effected in Rome between Italy and Turkey on 10 November 1948. Each Government, within the framework of their import and export regulations, will allow the other as preferential

a treatment as possible in regard to the reciprocal granting of import and export permits.

The Italian Government and the Turkish Government will authorize the export of the merchandise figuring respectively in Lists A and B appended to the Decree, to the extent of the quantities or values which are assigned to each commodity (annual quotas in tons or in Turkish pounds). It is understood that the commodities not given in the lists, as well as those whose quotas are filled, can be exported or imported by either side on condition that authorization is obtained previously from the competent authorities of the two countries.

The list of Italian commodities to be exported to Turkey includes the following : fishery equipment, seed-rice, cork, tractors, farm machinery and implements. Turkish export goods will comprise fish, canned fish, fish oil and liver, fish meal, live pigs, eggs, guts, bones, hooves and horns, hides and leathers, canary-grass and millet, beans, lentils, chick-peas, linseed, sesame, cotton, sunflower, poppy and rape-seed, olive, sesame, cottonseed and other vegetable oils, tobacco, timber, cotton.

ITALY : BELGO-LUXEMBOURG ECONOMIC UNION

■ Decree N° 655 of May 1949 (Suppl. to *G.U.*, N° 220, 24 September 1949, p. 2) ratifies the economic agreements and exchange of Notes between Italy and the Belgo-Luxembourg Economic Union, the Belgian Congo and the dependencies of Ruanda Urundi, effected in Rome on 31 December 1948.

The Union and Italy will each allow the other as liberal a treatment as possible in the granting of export and import permits, so as to intensify the rate of their traditional trade exchange.

Two Lists A and B indicate the Italian and Union exports and the quotas of the goods which will be given favoured treatment. The Italian commodities include pickled products and pig-meats, ornamental fish, cheeses, flower bulbs, living and ornamental plants, cut flowers, tomatoes, onions, garlic, early potatoes, cauliflowers, beans, haricot beans, fresh vegetables, oranges, lemons, rice, olive oil, wines, lumber, cork.

Among the Union exports to Italy are draught (gelded) and breeding horses, eggs, fresh fish, canned fish, herrings, Congo coffee, cereal seed, linseed, palm oil, vegetable fats, scutched flax, farm machines, hides and leathers.

(c) Foreign trade

FRANCE

■ In order to regulate the delivery of import licences, Decree N° 49-927 of 13 July 1949 (*J.O.*, N° 166, 14 July 1949, p. 6885) lays down that within fifteen days dating from the carrying into effect of a trade agreement with a foreign country or of the provisions

decided by a Joint Commission, of an import plan or program, a Notification of the Minister of Finance and Foreign Affairs shall indicate the conditions under which the anticipated imports can be effected. This Notification gives the opening date for sending in applications to obtain licences.

Import licences shall only be granted to bodies corporate or individuals whose calling requires the utilization or sale of the commodity for which importation is requested.

The Foreign Exchange Office accepts the applications for import licences and acknowledges their receipt. It calls for investigation of the applications by the Technical Services of the responsible ministries and delivers the licences in accordance with the decision of the said Services, within the limit set for the quotas and contingent on the methods of payment being in conformity with the exchange regulations. The same Office will advise the parties concerned of rejection of their applications, and will see that the provisions in force are complied with.

Importers are required, should it be necessary, to notify the Foreign Exchange Office, within 15 days following expiry of the validity of the import licence of total or partial failure to utilize their licence. Non-utilization, when it is a speculative manoeuvre, can entail rejection of applications for licences presented subsequently by the same importer.

PORTUGAL

■ Decree-Law N° 37 : 538 of 2 September 1949 (*S.d.G.*, 1st Series, N° 192, 2 September 1949, p. 641) establishes the Export Aid Fund ('Fundo de Fomento de Exportação') for the purpose of promoting increased exportation of national products.

To this end, the Fund shall finance, by means of subsidies or loans, the national missions, services or organizations which are located in other countries, for purposes of study, information and market observation, and also to advertise and protect Portuguese products on foreign markets.

The income of the Fund will be derived from taxes levied on imported goods, from contributions paid by the corporate and economic coordination bodies attached to the Ministry of Economy, etc.

SWITZERLAND

■ Ordinance N° 56 of 15 July 1949 (*R.L.F.*, N° 29, 21 July 1949, p. 843) abolishes import controls in regard to flour, cacao beans, starches.

Ordinance N° 55 of 17 August 1949 (*R.L.F.*, N° 33, 25 August 1949, p. 1165) lays down that the export of all goods on the export tariff, as well as the commodities indicated below, to any country whatsoever, can only be effected by special licence: rice, wheat and rye flour, bread, cheese, rennet, calf stomachs, etc.

(d) Conditioning and technical inspection of export commodities

(i) Groundnuts

FRANCE

■ Order N° 49-1323 of 25 August 1949 (*J.O.*, N° 232, 1 October 1949, p. 9769) carries detailed provisions relative to the conditioning of groundnuts. The exportation and importation in territories within the jurisdiction of the Ministry for Overseas France, as well as the importation into France of groundnuts originating or coming from these territories, can only be effected in conformity with the rules prescribed by the Order. Groundnuts are classed into two categories: dessert or confectionery groundnuts; groundnuts for oil extraction. The Order contains rules regarding the definition of groundnuts and their quality, packing, marking, inspection, sample checking, etc.

(ii) Cinchona bark

FRANCE

■ Order N° 49-1322 of 25 August 1949 (*J.O.*, N° 232, 1 October 1949, p. 9767) prescribes detailed rules relative to the conditioning of cinchona bark. To be accepted for exportation and importation in the territories within the jurisdiction of the Ministry for Overseas France, as well as for importation into France, dried cinchona bark originating or coming from these territories, will be subject to the rules laid down by the Order in regard to quantity, packing, inspection, sample checking, etc.

(iii) Broad beans and horse beans

ALGERIA

■ An Order of 26 October 1949 (*J.O.A.*, Part I, N° 87, 1 November 1949, p. 1281) amends the provisions of the Order dated 27 June 1938 fixing the rules applying to the grading of broad beans and horse beans on exportation from Algeria.

In consequence of this amendment broad beans and horse beans which do not correspond to the standards for quality but, however, have the characteristics of a genuine and marketable product, may be shipped labelled 'Fèves de récolte' when the consignment consists of broad beans only, or 'Fèverolles de récolte' for consignments of horse beans only, or 'Fèves et fèverolles de récolte' for mixed consignments. Other dispositions refer to tares, packing, marking and insect disinfection operations

(iv) Lentils

ALGERIA

■ An Order dated 26 October 1949 (*J.O.A.*, Part I, N° 87, 1 November 1949, p. 1280) establishes the rules applying to the standards for lentils exported from Algeria. The shipping of lentils which do not meet the requirements laid down by the Order is

prohibited. The only authorized grades for Algerian lentils are 'extra' and 'standard'. The consignments must keep strictly to type as regards quality, commercial grade and size, and special rules are laid down for commercial grades, size, packing, marking and insect disinfestation.

(v) *Honey*

MADAGASCAR

■ Order of 29 June 1949 (*J.O.M.*, N° 3346, 9 July 1949, p. 990) establishes the conditioning of exported honey. To be accepted for exportation from the territories of Madagascar and Dependencies, the honey originating or coming from these territories is subject to rules regarding classification and quality, packing, marking, inspection, etc. Three types of honey have been established, namely: Type I, Light honey; Type II, Red or light brown honey; Type III, Ordinary clarified and filtered honey.

(vi) *Peaches*

FRANCE

■ Order dated 9 June 1949 (*J.O.*, N° 163, 10 July 1949, p. 6783) carries application of the national quality mark for market peaches (Ex. of N° 77 B of customs tariff) to be consumed fresh, by virtue of article 2 of Decree dated 12 June 1946 bearing regulation for the enforcement of Act dated 1 August 1905 for the suppression of fraud in the sale of merchandise, in so far as regards the national quality mark.

This mark may only be affixed to cases of peaches meeting at least the requirements of category 'A' specified by the French standard V 21-001 and intended for both the home market and for export. The affixing of the stamp representing the national quality mark dispenses with the use of the export label specified by the Decree containing the public administrative regulation of 2 August 1947, but the cases or packs remain subject to the regulations at the frontier stations applicable to shipments made without the export label.

(vii) *Vanilla*

MADAGASCAR

■ An Order of 25 May 1949 (*J.O.M.*, N° 3341, 4 June 1949, p. 773) bears measures relative to the checking of vanilla conditioning, reorganized by Order of 5 June 1947. The final checking operations may take place at any of the permanent or casual stations indicated in the list established by Order of 29 October 1947, supplemented by Order dated 24 January 1948.

(e) *Olives and olive oil*

FRANCE

■ Order of 6 September 1949 (*J.O.*, N° 217, 14 September 1949, p. 9289) establishes at the Ministry of

Agriculture a Technical Committee instructed to study and propose all measures concerning guarantees, verification of quality and advertising of national olives and olive oil, particularly in regard to exportation.

(f) *Wines*

LUXEMBOURG

■ By Decree of 19 August 1949 (*M.L.*, N° 39, 6 September 1949, p. 930), whosoever imports wine from another country, including Belgium, for resale, will be required to send to the Inspector for wines an import statement two days at the latest after receipt or cellaring of the said wine. The statement must contain the following particulars: addresses of the foreign seller, importer and consignee; country of origin; brand of wine; quantity and per cent. alcohol; transport route; place where the wine is stored; price per litre out of bond and the custom house. For each type of wine imported in quantities exceeding 4000 litres, all importers must submit two samples of at least 0.7 litre, of which one sample will be forwarded for tasting to the inspector for wines.

(g) *Price control and fixing*

(i) *Coffee*

BELGIUM

■ A Ministerial Order of 25 October 1949 (*M.B.*, N° 300, 27 October 1949, p. 9916) lays down the conditions relative to the sale of coffee held in stock, as well as the quantities of coffee to be imported in execution of contracts concluded before 20 September 1949. By virtue of this Order, the importer of unroasted coffee cannot exceed the prices ruling on 20 September 1949 for quantities in stock available inside the country; for the quantities on the market or to be shipped, already sold in execution of a contract concluded before 20 September 1949, the prices resulting from these contracts, and for quantities purchased before 20 September 1949 at the old rate of exchange and of which the importer has retained the exclusive ownership, the normal price established, for each variety, from the buying price at the date of 12 September 1949.

Coffee roasters, wholesalers and retailers cannot charge a percentage on all the coffees sold higher than that charged on 20 September 1949.

MADAGASCAR

■ Order dated 9 June 1949 (*J.O.M.*, N° 3342, 11 June 1949, p. 807) fixes the prices and export conditions for the 1949-50 season coffees. F.o.b. prices for coffee are and remain those which were fixed by Orders of 1 and 16 December 1948. The coffees stocked on 7 November 1948 will be exported at the prices fixed by Order of 16 March 1948, with the exception of coffees held by planters or on behalf of planters.

(ii) *Cereals*

FRANCE

■ Decree N° 49-1151 dated 18 August 1949 (*J.O.*, N° 195, 19 August 1949, p. 8208) determines the prices and methods of payment, stocking and reconveyance of cereals for the 1949-50 crop year.

The price at production centre per quintal of home-grown soft wheat, sound, genuine and marketable, of the 1949 crop, is fixed at 2,500 francs for a specific weight per hectolitre between 76.5 kg. and 76.499 kg. Allowances and rebates are envisaged for higher or lower specific weights, impurities, broken wheat, extraneous grain, etc.

The same Decree establishes the prices at production centre for rye, oats, barley, buckwheat and maize. In the case of paddy, the Minister of Agriculture, in conjunction with the Minister of Finance and Economic Affairs, is authorized to fix the price for the 1949 crop as well as the allowances and rebates, etc. On the other hand, the prices for sorghum, millet, durra and canary-grass may be freely arranged between the buyer and seller.

Other provisions concern the payment, stocking and reconveyance rules for cereals.

MOROCCO

■ An Order of 25 June 1949 (*B.O.M.*, N° 1918, 29 July 1949, p. 929) determines the bases of transactions which may be effected for soft wheats of the 1949 crop.

By virtue of this Order, the purchase price, to the producer, is fixed at 2,100 fr. the quintal. The price applies to good quality soft wheats, with a weight of 77 kg. to the hectolitre, and containing 3 per cent. impurities (inert matter, extraneous grains, barley). The price is increased by bonuses or reduced by rebates according to the weight per hectolitre of wheat and according to the kind and percentage of impurities and broken grain. The price may be increased by the bonus for baking value if this value is higher than W 150.

The flour-mill delivery price is fixed at 2,351 fr. per quintal, comprising the amount of 2,100 fr. paid to the producer, the reconveyance allowance granted to cooperative associations and approved merchants fixed at 40 fr. the quintal and the sum of 211 fr. per quintal for payment of stocking, handling and transport. The aforesaid bonuses and rebates also apply to the delivery price.

(iii) *Oilseeds*

FRANCE

■ An Order of 27 August 1949 (*J.O.*, N° 203, 28 August 1949, p. 8659) fixes the prices of home-grown oilseeds of the 1949 crop. The maximum prices per 100 kg. are fixed as follows: colza, rape, sunflower, safflower, cabbage, white mustard, soybean (black variety), 6,000 francs; linseed, castor beans, poppy-seed, soybean (yellow variety), 7,200

fr.; false flax, 5,400 fr. and recuperated seed (charlock, wild radish, etc.), 2,400 fr.

Another Order of 27 August 1949 (*Ibid.*, p. 8659) establishes the coefficients for determining the prices of home-grown oil seeds and fruits of the 1950 crop. The fixed maximum price for the 1950 season colza seed, at warehouse, will be determined by applying the coefficient 2.2 to the net price of wheat, such as will be homologated by the Decree fixing the price of 1950 wheat. The fixed maximum prices of other home-grown oil seeds and fruits from the 1950 crop will be calculated by applying to the price of colza, coefficients as follows: linseed, rape poppy-seed, castor beans, 1; sunflower, soybean, 0.7; safflower, 0.6; white mustard seed, 0.5. The prices for false flax seed, cabbage and the so called recuperated seed (charlock, wild radish, etc.) will be determined according to the oil percentage of these seeds in comparison with colza.

(iv) *Milk*

FRANCE

■ Order N° 49-1245 of 10 September 1949 (*J.O.* N° 218, 15 September 1949, p. 9312) fixes the price of milk for the 1949-50 season. The average price at production centre for cow's milk for 1949-50 is fixed at 20.86 francs the litre. In each Department, the price in winter and in summer will be established by Prefectorial Order according to the instructions of the Minister of Agriculture and the Secretary of State for Economic Affairs.

(h) *Livestock and animal products*

FRANCE

■ Order dated 8 July 1949 (*J.O.*, N° 162, 9 July 1949, p. 6735) annuls the prescriptions of Interministerial Order of 6 September 1945 relative to the circulation of animals intended for rearing, breeding, work, milk production and slaughter, pertaining to the bovine, ovine, caprine, porcine and equine species; preserved meat; pig-meats; fresh, chilled, frozen, salted, smoked, dried meat or pork.

(i) *Butter*

BELGIUM

■ A Ministerial Order of 1 September 1949 (*M.B.*, N° 265, 22 September 1949, p. 8956) establishes official verification of the quality of butter, in order to guarantee the consumer the origin and quality of this product.

The Order makes it compulsory for the licence delivered by the National Office for Milk and Dairy Products to be taken out by owners or holders of milch cows who sell or deliver butter produced on their farms. The licence shall only be accorded on condition that the owner employs drinking water in making the butter and for cleaning the utensils

utilized; that the equipment and premises where the butter is made and stored comply fully with cleanness and hygiene standards and that he take an active part in the control of bovine tuberculosis. In addition, the packing or container of the butter sold should bear, besides the name, address and licence number of the producer, and the weight of the contents, the phrase 'farm butter'.

The Order also prescribes detailed provisions regarding the verification of butter manufactured by dairies or butter-dairies. The butter will be classed under the following three grades: 1st Grade, dairy butter with verification stamp; 2nd Grade, dairy butter; 3rd Grade, cooking butter. Grade I butter must bear on the wrapper a special stamp corresponding to the specimen prescribed by the Order. Unless otherwise decided, only dairy butter with the verification stamp is accepted for export.

LUXEMBOURG

■ Ministerial Order of 28 September 1949 (*M.L.* No 48, 31 October 1949, p. 1022) repeals Order dated 31 May 1949 (see this *Bulletin*, 1949, No 3, p. 236) and amends the procedure for paying the Government subsidies for butter.

In accordance with the new procedure, the amount of the subsidy to be paid during the winter season beginning 1 October 1949 is fixed, for Rose Brand pasteurized butter, at 27 fr. per kg.; Rose Brand butter: 25 fr. per kg.; dairy butter: 22 fr. and farm butter: 12 fr. per kg. The subsidy is granted for a genuine wholesome product, containing at least 82 per cent. butyric fats.

(j) Milk and dairy products

BELGIUM

■ Ministerial Order dated 9 September 1949 (*M.B.*, No 265, 22 September 1949, p. 8954) prescribes measures relative to the official and compulsory control of certain imported dairy products. It is prohibited to put up for sale on the home market, imported butter, cheese, milk powder and concentrated milk, if these products have not been verified beforehand by the National Office for Milk and Dairy Products in regard to their origin and composition. The importers are required to pay the cost of these official tests which is fixed by the Order.

Products originating in the Netherlands and the Grand Duchy of Luxembourg are not subject to the dispositions of the Order in as much as they are tested and verified for export in their country of origin.

LUXEMBOURG

■ A Grand Ducal Decree of 4 August 1949 (*M.L.*, No 38, 20 August 1949, p. 920) establishes that beginning 1 July 1949 the delivery of milk for consumption is subject to the tax on turnover at the

lump rate of 1 per cent. This tax is paid at the time of delivery by the dairies and covers subsequent deliveries up to and including that made to the consumer.

IV. - FISHERY

FRANCE

■ Order dated 1 October 1949 (*J.O.*, No 239, 9 October 1949, p. 10163) officially prohibits the use of the fishing net called 'gangui à poissons' both day night, in the waters of Prud'homme de Marseille, and by both sailing vessels and power-driven fishing vessels.

V. - RURAL WELFARE

(a) Family allowances

FRANCE

■ Act No 49-946 of 16 July 1949 (*J.O.*, No 168, 17 July 1949, p. 6944) establishes a supplement budget for rural family allowances, attached to the general budget of the State, and of which the administration is entrusted to the Minister of Agriculture, assisted by the Higher Committee for rural family allowances acting as administrative committee for the supplement budget. The supplement budget substitutes the rights and obligations of the 'Fonds national de solidarité agricole'.

The total receipts for the supplement budget for the budgetary year 1949 have been calculated at 45,600,000,000 francs. This budget is financed by various taxes, duties and fines at present assigned to the 'Fonds national de solidarité agricole', and by other resources established by the law.

SWITZERLAND

■ Federal Order dated 22 June 1949 (*R.L.F.*, No 41, 27 October 1949, p. 1583) regulates the system of family allowances to agricultural workers and mountain peasants.

In general, agricultural workers and mountain peasants are entitled to family allowances.

By agricultural allowance recipients are meant wage earners who carry out, for payment on a farm, agricultural, forestal work or farm-house work. Foreign agricultural workers are also entitled to allowances provided, however, that they live in Switzerland with their family.

The allowances consist of family allowances and children allowances. The former are calculated at 30 francs per month or 1.30 fr. per day of work; the latter, 8.50 fr. per month or 34 centimes per day of work for each child under 15 years. The total allowance paid to the agricultural worker should not exceed 81 francs per month or 3.24 fr. per day of work.

In regard to family allowances to the mountain peasants, the Order lays down that by mountain

peasants are intended persons of independent position who are engaged chiefly, in a mountain region, in operating an agricultural holding with an output capacity, expressed in head of cattle, of 12 head at the most. The allowance is granted for each child entitled at the rate of 8.50 fr. per month. In holdings having 1 to 6 head of cattle, all the children under 15 years are entitled to the allowance; in holdings with 6 to 9 head of cattle, one child and, in those with 9 to 12 head of cattle, two children do not entitle the family to the allowance.

No one may benefit from the family allowances simultaneously as an agricultural worker and as mountain peasant.

(b) Cooperation

FRANCE

■ Order dated 13 July 1949 (*J.O.*, N° 167, 15-16 July 1949, p. 6923) establishes that agricultural cooperative associations for hemp stripping and

retting may accept as users all producers of green hemp fibre, even if not members of these cooperatives.

(c) Housing

BELGIUM

■ Act of 6 July 1949 (*M.B.*, N° 199-200, 18 and 19 July 1949, p. 6888) bears provisions relative to the housing of workers in industrial or commercial enterprises and undertakings. By agricultural enterprises are intended agricultural enterprises proper, stock-farming enterprises, horticultural enterprises and forestry enterprises, except those where the owner only works with members of his family living with him, or with servants.

The Government is authorized to prescribe measures to ensure safe, sanitary and decent housing, by general ordinances and after having consulted one or several of the bodies set up for the supervision of public health and labour.

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